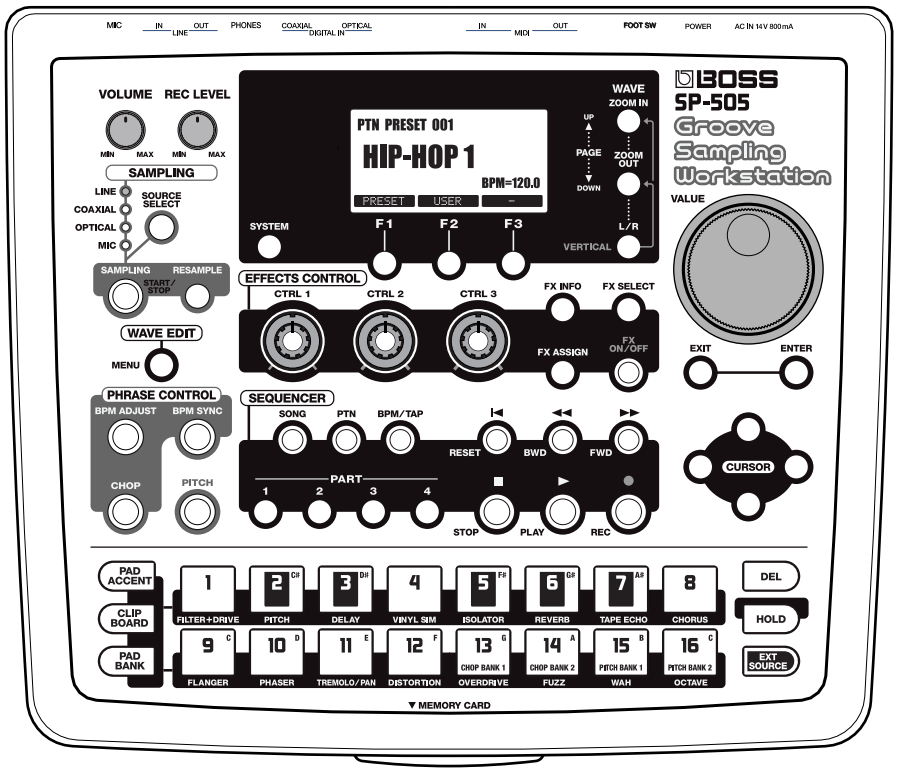
SP-505

Groove Sampling Workstation

SERVICE NOTES
Issued by RJA



SPECIFICATIONS

SP-505: Groove Sampling Workstation

Maximum Polyphony

8 notes

Internal Memory

Samples: 250 (16 banks)

Expansion Card Memory

Samples: 256 (16 banks)

Maximum Sampling Time

Internal (times approximate)

STANDARD	LONG	LO-FI
2 minutes	5 minutes	17minutes

Memory card (times approximate)

Capacity	STANDARD	LONG	LO-FI
8 MB	4 minutes	8 minutes	24 minutes
16 MB	8 minutes	16 minutes	49 minutes
32 MB	16 minutes	32 minutes	98 minutes
64 MB	32 minutes	64 minutes	197 minutes
128 MB	64 minutes	129 minutes	395 minutes

Sampling Frequency

STANDARD: 44.1 kHz
LONG: 22.05 kHz
LO-FI: 11.025 kHz

Data Format

SP-505 original format

Track Recording Methods

Event recording (Realtime/Microscope Edit)
Audio recording

Number of Recordable Events (pad operations)

Approximately 15,000 events

Signal Processing

AD conversion: 20 bit
DA conversion: 20 bit

Nominal Input Level

Input (line): -10 dBu
Input (mic): -55 to -25 dBu

Input Impedance

50 k ohm (line)
2 k ohm (mic)

Nominal Output Level

Output (line): -10 dBu

Output Impedance

2 k ohm

Display

128 x 64 pixels
Graphic LCD with backlight

Connectors

PHONES jack (Stereo 1/4 inch phone type)
MIC jack (1/4 inch phone type)
LINE OUT jacks L/R (RCA phono type)
LINE IN jacks L/R (RCA phono type)
DIGITAL IN connectors (optical/coaxial)
FOOT SW jack (1/4 inch phone type)
MIDI connectors (IN/OUT)
AC Adaptor jack (AC 14 V)

Power Supply

AC Adaptor (BRC series)

Current Draw

800 mA

Dimensions

298 (W) x 254 (D) x 64 (H) mm
11-3/4 (W) x 10 (D) x 2-9/16 (H) inches

Weight

1.4 kg/ 3 lbs 2 oz (excluding AC Adaptor)

Accessories

AC Adaptor BRC-100T (#01786212)
BRC-120T (#01786223)
BRC-230T (#01786234)
BRC-240AT (#01786245)
Owner's Manual ENGLISH:(#71897778)
JAPANESE:(#71788234)

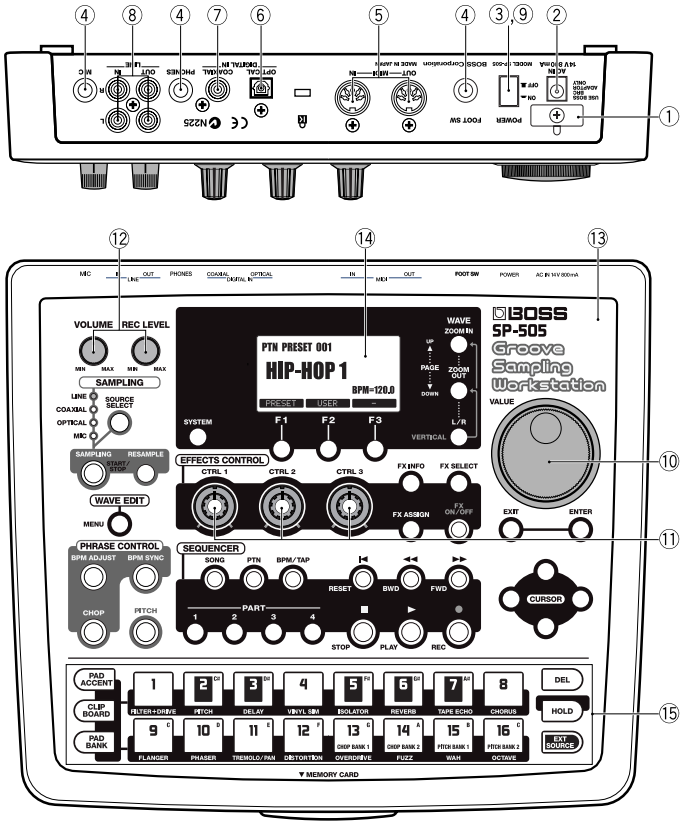
Options

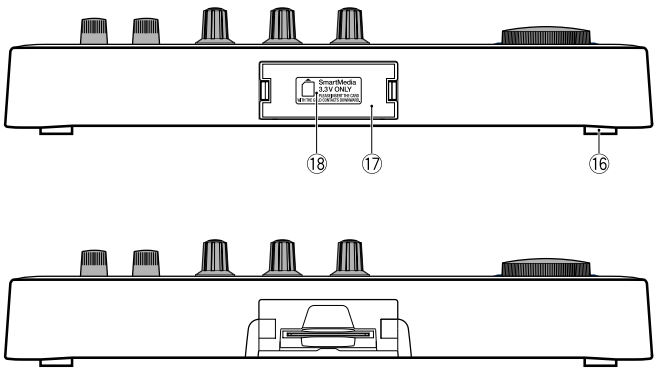
Foot Switch: FS-5U

* *0 dBu = 0.775 Vrms*

* *In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.*

LOCATION OF CONTROLS

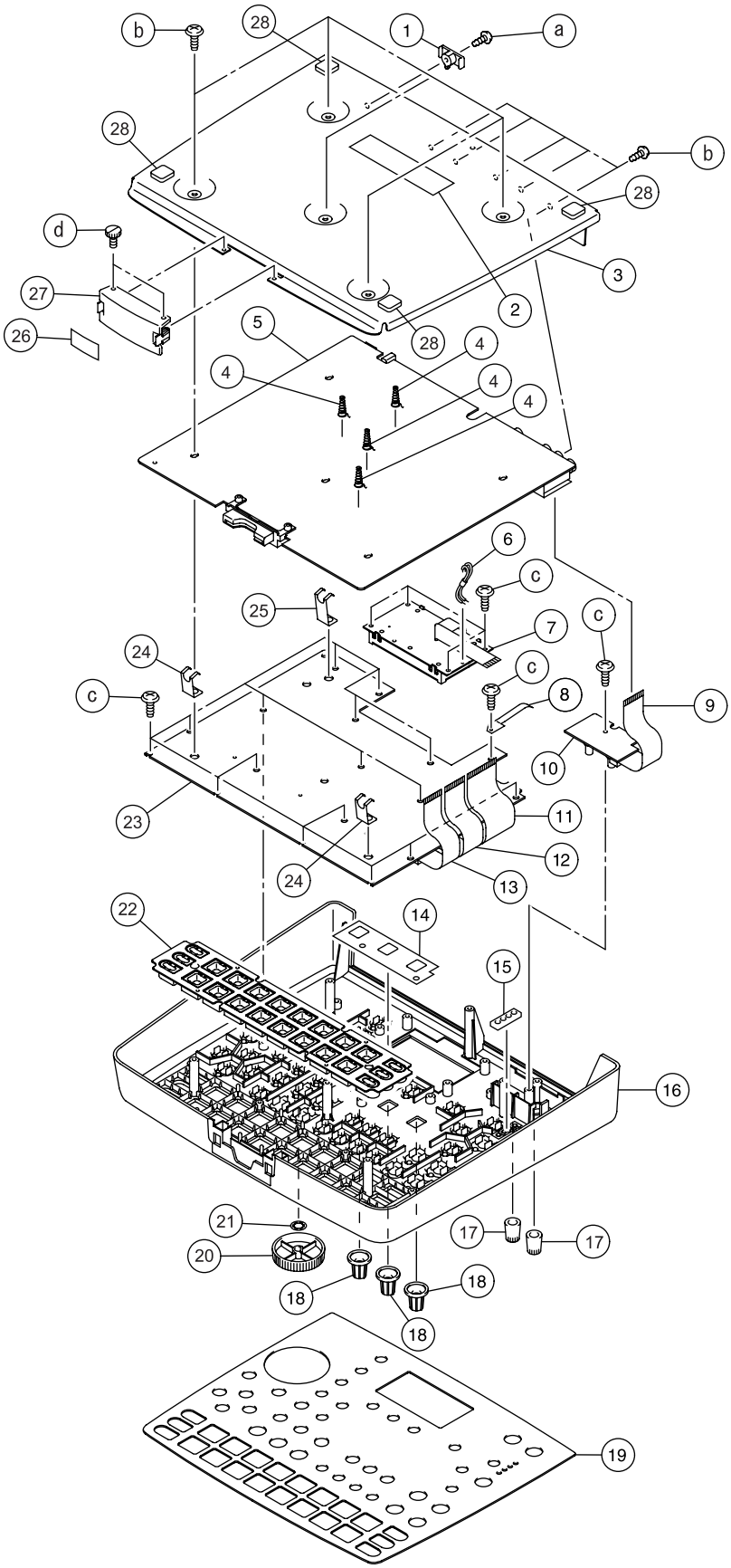




LOCATION OF CONTROLS PARTS LIST

no.	PART CODE	PART NAME	DESCRIPTION	Q'TY
1	22365714	CORD HOOK		1
2	13449728	ADAPTOR JACK	HEC0740-010010	1
3	12499175	G S-BUTTON	S1H BLK 249-175	1
4	00569278	6.5MM JACK	LGR4609-7100	3
5	13429676	MIDI CONNECTOR	YKF51-5048 (TWIN)	1
6	02236990	IC (OPTICAL CONNECTOR)	GP1F550RZ RX	1
7	01343723	RCA(PIN) JACK	YKC21-3117(ORANGE)	1
8	13449645	JACK (PIN)	YKC21-3049 (4P) RED/WHITE	1
9	01676512	PUSH SWITCH	SDKLA1-B	1
10	22485303	D R-KNOB(ALPHA-DIAL)	L BLK 248-303	1
11	02457512	J R-KNOB	SFA BLK/LCG	3
12	22480260	P R-KNOB	MF BLK/LCG	2
13	02454556	PANEL SHEET		1
14	02565034	LCD	F-51320GNY-LY-AA	1
15	02454567	RUBBER SW		1
16	02236489	FOOT	14.5X14.5	4
17	02451812	CARD COVER		1
18	40347767	LABEL	SMARTMEDIA	1

EXPLODED VIEW



EXPLODED VIEW PARTS LIST

[Parts]

NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY
1	22365714	CORD HOOK		1
2	40344445	LABEL FCC CAUTION		1
3	02454523	BOTTOM COVER		1
4	02780878	LEAF SPRING 3		4
5	71788201	MAIN BOARD ASSY	WITHOUT SPRING	1
6	02458301	WIRING1	(LCD BACKLIGHT)	1
7	02565034	LCD	F-51320GNY-LY-AA	1
8	02891134	LEAF	SW-EARTH	1
9	02784889	BAN CARD	BNCD-S-P=1.25-K-14-120 (GS:7)	1
10	*********	VR BOARD ASSY		1
11	02567445	BAN CARD	BNCD-P=1.00-K-30-120	1
12	02673523	BAN CARD	BNCD-P=1.25-K-16-130	1
13	02231789	BAN CARD	BNCD-P=1.25-K-14-120	1
14	02891156	VR COVER		1
15	02891145	LED COVER		1
16	02454512	TOP CASE		1
17	22480260	P R-KNOB	MF BLK/LCG	2
18	02457512	J R-KNOB	SFA BLK/LCG	3
19	02454556	PANEL SHEET		1
20	22485303	D R-KNOB(ALPHA-DIAL)	L BLK 248-303	1
21	40235189	RING	SE-9	1
22	02454567	RUBBER SW		1
23	*********	SW BOARD ASSY		1
24	02893334	LEAF	SPRING SW-MAIN S	2
25	02891123	LEAF	SPRING SW-MAIN L	1
26	40347767	LABEL	SMARTMEDIA	1
27	02451812	CARD COVER		1
28	02236489	FOOT	14.5X14.5	4
29	71788212	SW SHEET ASSY		1
NOTE: 'SW SHEET ASSY' includes the following parts.				
10	*********	VR BOARD ASSY		1
23	*********	SW BOARD ASSY		1

[screw]

no.	PART CODE	PART NAME	DESCRIPTION	Q'TY
a	40015956	SCREW M3X12	BINDING HEAD S-TIGHT BZC	1
b	40011312	SCREW 3X8	BINDING TAPTITE P BZC	11
c	40011278	SCREW 3X8	BINDING TAPTITE P FE ZC	22
d	40451234	COIN SCREW M3X8	BZC	2

PARTS LIST

SAFETY PRECAUTIONS:
The parts marked ⚠ have safety-related characteristics. Use only listed parts for replacement.

CONSIDERATION ON PARTS ORDRING
When ordering any parts listed in the parts list, please specify the following items in the order sheet.

	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER
Ex.	10	22575241	Sharp Key	C-20/50
	15	2247017300	Knob (orange)	DAC-15D

Failure to completely fill the above items with correct number and description will result in delayed or even undelivered replacement.

NOTE: The parts marked # are new. (initial parts)

CASING

#	02454512	TOP CASE			1
#	02454523	BOTTOM COVER			1
	02451812	CARD COVER			1
#	02454556	PANEL SHEET			1
#	02891145	LED COVER			1
#	02891156	VR COVER			1

KNOB, BUTTON

	12499175	G S-BUTTON	S1H BLK 249-175		1
	22480260	P R-KNOB	MF BLK/LCG		2
	02457512	J R-KNOB	SFA BLK/LCG		3
	22485303	D R-KNOB(ALPHA-DIAL)	L BLK 248-303		1
#	02454567	RUBBER SW			1

SWITCH

	01676512	SDKLA1-B	PUSH SWITCH	SW1 on MAIN	1
	01340290	EVQ11A H=5.0	TACT SWITCH	SW44,SW50,SW49,SW45,SW43,SW42,SW37 ,SW36,SW34,SW47,SW52,SW53,SW54,SW5 6,SW57,SW60,SW61,SW62,SW63,SW64,SW 65,SW51,SW26,SW19,SW20,SW21,SW22,S W23,SW32,SW25,SW16,SW27,SW28,SW29, SW30,SW31,SW24,SW17,SW14,SW15,SW13 ,SW11,SW10,SW9,SW8,SW7,SW6,SW5,SW4 ,SW3,SW2,SW18,SW12,SW35,SW38,SW39,S W40,SW46,SW48,SW33 on SW	38

JACK, EXT TERMINAL

	13429676	YKF51-5048 (TWIN)	MIDI CONNECTOR	JK6 on MAIN	1
	01343723	YKC21-3117(ORANGE)	RCA(PIN) JACK	JK4 on MAIN	1
	13449645	YKC21-3049 (4P) RED/WHITE	RCA(PIN) JACK	JK2 on MAIN	1
	01780712	CN015P-3013-0	CARD CONECTR	CN1 on MAIN	1
	00569278	LGR4609-7100	6.5MM JACK	JK3,JK1,JK5 on MAIN	3
	13449728	HEC0740-010010	ADAPTOR JACK	JK7 on MAIN	1
⚠	00905234	ECP01-5A (PLUG FOR BRC-230T)	EURO CONVERTER PLUG		1

DISPLAY UNIT

	02565034	F-51320GNY-LY-AA	LCD		1
	NOTE: Replacement F-51320GNY-LY-AA should be made on a unit base.				

PCB ASSY

#	71788201	MAIN BOARD ASSY	WITHOUT SPRING		1
	NOTE: 'MAIN BOARD ASSY' includes the following parts.				
	01011278	JACK COVER			1
	01786712	ESCUTCHEON			1
	01906845	AC JACK HOLDER			1
	40011278	SCREW 3X8	BINDING TAPTITE P FE ZC		2
#	71788212	SW SHEET ASSY			1
	NOTE: 'SW SHEET ASSY' includes the following parts.				
#	*********	VR BOARD ASSY			1
#	*********	SW BOARD ASSY			1

IC

#	02673545	UPD703102AGJ-33-W04-UNE	IC (16BIT CPU)	IC33 on MAIN	1
	01235190	TC203C040AF-001(FP)	IC (MR2 CHIP)	IC10 on MAIN	1
	02121556	LC24085B-SD1	IC (I/F)	IC15 on MAIN	1
	02568489	DRAM GM71V18163CT-6	IC (DRAM)	IC38 on MAIN	1

IC

#	02563089	NN51V4400BLTT-60	IC (DRAM)	IC52 on MAIN	1
#	02781990	LH28F800BJE-PBTL90	IC (FLASH MEMORY)	IC36 on MAIN	1
#	*********	MBM30LV0064-PFTN-FJ	IC (FLASH MEMORY)	IC29 on MAIN	1
	01780112	AK4522VF	IC (AD/DA)	IC6 on MAIN	1
	00785245	TC75H00F(TE85L)	IC (CMOS)	IC64 on MAIN	1
#	02892334	IC (CMOS)	TC74LCX245FT(EL)	IC67 on MAIN	1
#	02892323	IC (CMOS)	TC74LCX244FT(EL)	IC66 on MAIN	1
	15249104	TC7S04F(TE85L)	IC (CMOS)	IC34 on MAIN	1
	15249111	TC7WU04F(TE12L)	IC (CMOS)	IC61 on MAIN	1
	15259887	TC7SU04F(TE85L)	IC (CMOS)	IC2 on MAIN	1
	15249112	TC7W32F(TE12L)	IC (CMOS)	IC56 on MAIN	1
	15259884	TC7S08F(TE85L)	IC (CMOS)	IC62 on MAIN	1
	01786690	TC7SET08F(TE85L)	IC (CMOS)	IC59 on MAIN	1
	15259885	TC7S32F(TE85L)	IC (CMOS)	IC40,IC55,IC32 on MAIN	3
	00232645	TC7W14F(TE12L)	IC (CMOS)	IC54 on MAIN	1
	01455312	TC7WH74FU	IC (CMOS)	IC65 on MAIN	1
	02232834	TC7SH04F(TE85L)	IC (CMOS)	IC68,IC24 on MAIN	2
	01670789	TC74VHCT08AF	IC (CMOS)	IC19,IC25 on MAIN	2
	00236878	TC74VHC74F-EL	IC (CMOS)	IC20 on MAIN	1
	01560823	TC74VHC164F	IC CMOS	IC18 on MAIN	1
	01670734	TC74VHC541F	IC (CMOS)	IC23 on MAIN	1
#	01679023	TC74VHC157FT(EL)	IC (CMOS)	IC60 on MAIN	1
	01907689	TC7WH157FU(TE12L)	IC (CMOS)	IC21 on MAIN	1
	00236845	TC74VHC245F(EL)	IC (CMOS)	IC27 on MAIN	1
	00564701	TC7SH08F(TE85L)	IC (CMOS)	IC12,IC26 on MAIN	2
	01125012	NJM4556AM	IC (BIPOLAR OP AMP)	IC4 on MAIN	1
	15289105	UPC4570G2-E2	IC (BIPOLAR OP AMP)	IC8,IC5,IC1 on MAIN	3
	00346445	NJM2100M(TE3)	IC (BIPOLAR OP AMP)	IC3 on MAIN	1
	01458445	UPC29M33T-T1	IC (REGULATOR)	IC44 on MAIN	1
	15199138	AN7809F	IC (V.REGULATOR)	IC47 on MAIN	1
	01789967	AN78N05	IC REGULATOR	IC48 on MAIN	1
	15199286	AN78L05M-(E1)	IC (REGULATOR)	IC58 on MAIN	1
	02234778	NJM2360AM-TE3	IC (REGULATOR)	IC45 on MAIN	1
	02015678	LC89055W-RA8	IC	IC22 on MAIN	1
	00564690	TC9246F(ELP)	IC (PLL)	IC9 on MAIN	1
	02453045	S-80927ALMP-DAQ-T2	IC (RESET)	IC42 on MAIN	1
	02236990	GP1F550RZ RX	IC (OPTICAL CONNECTOR)	CN2 on MAIN	1
	15289124	PC-4007	PHOTO COUPLER	IC28 on MAIN	1
	15199918	M66310FP-31A	IC (LED DRIVER)	IC49,IC50 on SW	2

TRANSISTOR

	15309104	2SA1586-GR(TE85R)	TRANSISTOR	Q7 on MAIN	1
	00897201	2SA1706S-AN	TRANSISTOR	Q16 on MAIN	1
	15319107	2SC4116-GR(TE85R)	TRANSISTOR	Q8 on MAIN	1
	15319115	2SC4213-A(TE85L)	TRANSISTOR	Q14,Q12,Q11,Q10,Q9,Q18 on MAIN	6
	15329103T0	2SK880-GR(TE85R)	FET TRANSISTOR	Q4,Q6,Q5,Q2 on MAIN	4
	00898201	RN2421(TE85L)	TRANSISTOR	Q15 on MAIN	1
	15329533	RN2307(TE85R)	TRANSISTOR	Q1,Q17 on MAIN	2
	15329521	RN1307(TE85R)	TRANSISTOR	Q3 on MAIN	1

DIODE

	15339119T0	1SS352(TPH3)	SWITCHING DIODE	D1,D2,D4,D12,D3 on MAIN	5
	01899723	MA111-(TX)	SWITCHING DIODE	D6,D5 on MAIN	2
	00902978	SB07-03N-AA	SCHOTTKY DIODE	D7 on MAIN	1
#	02670378	S1NB60-4101 1A/600V	BRIDGE DIODE	D9 on MAIN	1
	15339121	1SS301(TE85R)(CHIP)	DIODE	DA2 onMAIN	1
				DA32,DA4,DA3,DA6,DA33,DA5,DA31,DA30,DA29,DA28,DA27,DA26,DA25,DA34,DA14,DA23,DA22,DA21,DA20,DA19,DA18,DA17,DA24,DA15,DA7,DA13,DA12,DA11,DA10,DA9,DA8,DA16 on SW	+32
	15339120T0	1SS302(TE85R)	ARRAY DIODE	DA3,DA4,DA1 on MAIN	3
	01457167	LNJ208R8ARA (CHIP)	LED (RED)	LED9,LED8,LED7,LED6,LED5,LED10,LED2,LED14,LED29,LED30,LED3,LED11,LED26,LED13,LED15,LED16,LED17,LED18,LED25,LED19,LED24,LED20,LED21,LED22,LED12,LED23,LED31,LED1,LED27,LED32,LED28 on SW	31

RESISTOR

	15399391	RPC10T 561 J	MTL.FILM RESISTOR	R91 on MAIN	1
	15399952	MCR50JZH470 1/2W	CHIP RESISTOR	R137,R97 on MAIN	2
	15399373	RPC10T 101 J 1/10W	MTL.FILM RESISTOR	R84,R78,R74,R72,R69,R47,R36,R113,R29,R24,R23,R20,R17,R43,R93,R112,R115,R121,R133,R130,R131,R132,R134,R12,R136,R138,R146,R147,R104,R148,R135 on MAIN	31

RESISTOR

	15399421	RPC10T 103 J 1/10W	MTL.FILM RESISTOR	R145,R46,R114,R88,R116,R128,R110,R144,R77,R89,R174,R98,R105,R106,R153,R107,R129,R37,R60,R52,R181,R71,R176,R111,R75,R61,R76,R35,R34,R14,R11,R10,R4,R109,R73,R182,R179,R166,R165,R188,R187,R186,R185,R184,R183,R154,R160,R169,R161,R180,R156,R155,R178,R108,R164 on MAIN R145 on SW	55 +1
	15399445	RPC10T 104 J 1/10W	MTL.FILM RESISTOR	R32,R33,R103,R1,R21,R139,R100,R140,R102,R95,R157,R158 on MAIN	12
	15399469	RPC10T 105 J 1/10W	MTL.FILM RESISTOR	R3,R7,R13,R26,R87,R101 on MAIN	6
	15399413	RPC10T 472 J 1/10W	MTL.FILM RESISTOR	R167,R168 on MAIN	2
	15419704	RR1220P-101-D 100 OHM (CHIP)	MTL.FILM RESISTOR	R68 on MAIN	1
	15399429	RPC10T 223 J 1/10W	MTL.FILM RESISTOR	R48,R39,R62,R57 on MAIN	4
	15399397	RPC10T 102 J 1/10W	MTL.FILM RESISTOR	R127,R126,R118,R41,R63,R175,R56,R55,R90,R142,R51,R143,R40,R6,R5 on MAIN	15
	15399381	RPC10T 221 J 1/10W	MTL.FILM RESISTOR	R170 on MAIN	1
	15399423	RPC10T 123 J	MTL.FILM RESISTOR	R64,R44 on MAIN	2
	15399441	RPC10T 683 J	MTL.FILM RESISTOR	R2 on MAIN	1
	15399437	RPC10T 473 J 1/10W	MTL.FILM RESISTOR	R15,R53,R38,R30,R28,R18,R9,R177 on MAIN	8
	15399461	RPC10T 474 J	MTL.FILM RESISTOR	R92,R99 on MAIN	2
	15419706	RR1220P-122-D 1.2K OHM (CHIP)	MTL.FILM RESISTOR	R122 on MAIN	1
	15399365	RPC10T 470 J 1/10W	MTL.FILM RESISTOR	R25,R125,R152,R151,R150,R149,R49,R117,R96,R58,R54,R124,R50 on MAIN	13
	15399357	RPC10T 220 1/10W	MTL.FILM RESISTOR	R16 on MAIN	1
	15399375	RPC10T 121 J	MTL.FILM RESISTOR	R94 on MAIN,R126 on SW	1 +1
	15399389	RPC10T 471 J 1/10W	MTL.FILM RESISTOR	R22,R27 on MAIN	2
	15399419	RPC10T 822 J 8.2K OHM 1/10W	MTL.FILM RESISTOR	R81 on MAIN	1
	01679312	RR1220P-362-D	MTL.FILM RESISTOR	R119 on MAIN	1
	15399427	RPC10T 183 J	MTL.FILM RESISTOR	R65,R19,R45,R31 on MAIN	4
	15399349	RPC10T 100 J 1/10W	MTL.FILM RESISTOR	R141 on MAIN	1
	15399439	RPC10T 563 J	MTL.FILM RESISTOR	R79 on MAIN	1
	15399401	RPC10T 152 J 1/10W	MTL.FILM RESISTOR	R70 on MAIN	1
	15419710	RR1220P-512D	MTL.FILM RESISTOR	R83,R82 on MAIN	2
	00121089	RPC10T 750 J	MTL.FILM RESISTOR	R80,R85,R86 on MAIN	3
	15399377	RPC10T 151 J 1/10W	MTL.FILM RESISTOR	R8 on MAIN	1
	00564189	RR1220P-152-D 1.5KOHM (CHIP)	MTL.FILM RESISTOR	R66 on MAIN	1
	00564201	RR1220P-224D 220K OHM (CHIP)	MTL.FILM RESISTOR	R67 on MAIN	1
	15399383	RPC10T 271 J	MTL.FILM RESISTOR	R120 onMAIN R136,R147,R159,R158,R157,R156,R155,R154,R153,R152,R151,R150,R134,R148,R127,R146,R135,R128,R129,R131,R149,R133,R144,R137,R138,R139,R140,R141,R142,R143,R132 on SW	1 +31
#	02893834	POLYSWITCH RXE090	POSISTOR RESISTOR	R123 on MAIN	1
	00126112	EXBV8V101JV	RESISTOR ARRAY	RA14,RA1,RA2,RA6,RA8,RA11,RA15,RA17,RA18,RA19,RA22,RA9 on MAIN	12
	00126134	EXB-A10E103J	RESISTOR ARRAY	RA5,RA7,RA10,RA21,RA12 on MAIN	5
	00902856	EXBV8V104JV	RESISTOR ARRAY	RA20,RA30 on MAIN	2
	01013578	EXBV8V470JV	RESISTOR ARRAY	RA28,RA29,RA27,RA26,RA25,RA24,RA16,RA3,RA4 on MAIN	9
	15409113	EXBV8V103JV	RESISTOR ARRAY	RA13,RA23 on MAIN	2
#	02457501	RSS1 T52 10 OHM J	MTL.OXIDE RESISTOR	R73 on SW	1

POTENTIOMETER

	01451101	EVJY95FB6A15	12M/M ROTARY POTENTIOMETER	VR1 on SW	1
	02900501	EVJY15FB6A54	12M/M ROTARY POTENTIOMETER	VR2 on SW	1
	01239067	RK09K1130 50KB	9M/M ROTARY POTENTIOMERTR	VR4,VR3,VR5 on SW	3

CAPACITOR

	15359616	ECUV1H150JCN 15P	CERAMIC CAPACITOR	C54 on MAIN	1
	15359448	ECJ2VB1H103K 0.01F/50V	CERAMIC CAPACITOR	C302,C301,C204,C203,C202,C201,C199,C1,C197,C168,C91,C198,C88,C66,C200 on MAIN	15
	15359436	ECJ2VB1H102K	CERAMIC CAPACITOR	C73,C41,C52,C71,C75,C118,C119,C120,C132,C172,C142,C145,C146,C156,C158,C169,C170,C133,C70 on MAIN	19
	01674423	ECUV1H471JCV	CERAMIC CAPACITOR	C149,C154 on MAIN	2
	02453423	ECJ2VC1H100D	CERAMIC CAPACITOR	C2,C7,C20,C31,C43,C105,C106,C134,C136,C193,C195 on MAIN	11
	02237778	ECJ2VB2A472K	CERAMIC CAPACITOR	C117,C111 on MAIN	2
#	15359437	ECJ2VB1H122K	CERAMIC CAPACITOR	C51,C38 on MAIN	2
	02453456	ECJ2VC1H101J	CERAMIC CAPACITOR	C2,C7,C34,C47,C178,C31,C190,C191,C192,C176,C195,C43,C105,C106,C20,C193,C134,C136 on MAIN	7

CAPACITOR

	15359206	ECJ2VF1E104Z 100000PF/25V	CERAMIC CAPACITOR	C163,C135,C179,C177,C175,C174,C173,C171,C167,C166,C182,C164,C183,C162,C157,C155,C153,C152,C148,C147,C144,C143,C140,C139,C138,C306,C165,C218,C305,C304,C303,C300,C232,C231,C230,C228,C227,C226,C180,C219,C130,C213,C212,C210,C208,C206,C205,C189,C188,C187,C186,C185,C184,C223,C58,C137,C77,C74,C72,C69,C68,C65,C64,C63,C62,C81,C60,C82,C57,C56,C55,C53,C40,C29,C27,C25,C23,C22,C16,C12,C11,C61,C101,C129,C121,C116,C115,C114,C113,C110,C109,C108,C107,C104,C80,C102,C209,C99,C98,C97,C96,C94,C92,C90,C89,C87,C86,C85,C84,C83,C103,C207 on MAIN,C166,C167 on SW	112+2
	15359440	ECJ2VB1H222K	CERAMIC CAPACITOR	C19,C14 on MAIN	2
	00568456	ECJ1VF1C474Z	CERAMIC CAPACITOR	C67 on MAIN	1
	01902590	RA2-6V101MC-T2	CHEMICAL CAPACITOR	C95,C100 on MAIN	2
	15369262	ECEV1HA010SR	CHEMICAL CAPACITOR	C214,C215,C4 on MAIN	3
	01900834	RA2-16V101M-T2	CHEMICAL CAPACITOR	C6,C32,C44 on MAIN	3
#	02892290	RE3-6V221M-T2	CHEMICAL CAPACITOR	C128 on MAIN	1
	13639605M0	ECEA1HU4R7B 4.7UF/50V	CHEMICAL CAPACITOR	C17,C24 on MAIN	2
	00568323	10SA100M+T	CHEMICAL CAPACITOR	C159 on MAIN	1
	13649707	ECA1EM102B	CHEMICAL CAPACITOR	C160 on MAIN	1
#	02785378	RE3-10V470M-T2	CHEMICAL CAPACITOR	C79 on MAIN	1
	13649269	ECA1CM100B 10UF/16V	CHEMICAL CAPACITOR	C48,C49,C59,C76,C78,C122,C46,C124,C141,C211,C123,C45,C36,C181,C35,C33,C30,C28,C26,C21,C15,C13,C8,C5,C3,C37,C220,C217,C221,C222,C131 on MAIN	31
	01902612	RA2-6V471MC-T2	CHEMICAL CAPACITOR	C151,C150 on MAIN	2
	00126545	6SA47M 6.3V/47UF	CAPACITOR	C112,C93,C42,C10,C225 on MAIN	5
	13639551	ECA1CM221B 220UF/16V	CHEMICAL CAPACITOR	C161 on MAIN	1
	02236878	ERZV07V330	VARICAP CAPACITOR	C229 on MAIN	1
#	02671145	EEVMC1C100R	CHEMICAL CAPACITOR	C172,C168 on SW	2
#	02784656	RV4-6V101M-R	CHEMICAL CAPACITOR	C170 on SW	1

INDUCTOR, COIL, FILTER

	02563301	ELC10D221E	CHOKE COIL	L5 on MAIN	1
	13529246	DSS310-91D223S-50ATL12-134	EMI FILTER	L32 on MAIN	1
	12449386	SBT-0180W	EMI FILTER	L65 on MAIN	1
	00903167	N2012Z601T02 (CHIP)	FERRITE-BEAD	L63,L51,L52,L53,L54,L55,L56,L57,L58,L59,L61,L50,L64,L66,L67,L68,L69,L70,L71,L72,L73,L74,L75,L42,L60,L12,L21,L20,L19,L18,L49,L16,L44,L22,L13,L17,L11,L10,L9,L8,L6,L4,L3,L2,L1,L14,L37,L46,L47,L15,L48,L23,L43,L40,L38,L45,L36,L35,L34,L33,L31,L30,L29,L28,L27,L25,L24,L39 on MAIN	68
#	02891034	N2012ZP121T	FERRITE-BEAD	L7 on MAIN	1
	00345812	N3216Z501A01	FERRITE-BEAD	L41 on MAIN	1

CRYSTAL, RESONATOR

#	01455212	MA-406 11.2896MHZ	CRYSTAL	X1 on MAIN	1
#	02673556	CX-49G 6.4MHZ	CRYSTAL	X2 on MAIN	1

ENCODER

	02671212	EVE GB1 F15 24B	ROTARY ENCODER	EN1 on SW	1

CONNECTOR

	01908634	14FE-BT-VK-N	CONNECTOR	CN5,CN14 on MAIN	2
	01908645	16FE-BT-VK-N	CONNECTOR	CN4 on MAIN	1
#	02567489	52030-3010	CONNECTOR	CN3 on MAIN	1
	02122456	14FE-ST-VK-N	CONNECTOR	CN9,CN12 on SW	2
	02010867	16FE-ST-VK-N	CONNECTOR	CN10 on SW	1
#	02567701	52689-3093	CONNECTOR	CN8 on SW	1
#	02567967	52089-3010	CONNECTOR	CN7 on SW	1

WIRING, CABLE

#	02458301	WIRING1	LCD BACKLIGHT		1
#	02784889	BAN CARD	BNCD-S-P=1.25-K-14-120 (GS:7)		1
	02231789	BAN CARD	BNCD-P=1.25-K-14-120		1
#	02567445	BAN CARD	BNCD-P=1.00-K-30-120		1
	02673523	BAN CARD	BNCD-P=1.25-K-16-130		1

SCREW

	40451234	COIN SCREW M3X8	BZC		2
	40011278	SCREW 3X8	BINDING TAPTITE P FE ZC		22

SCREW

	40011312	SCREW 3X8	BINDING TAPTITE P BZC	11
	40015956	SCREW M3X12	BINDING HEAD S-TIGHT BZC	1
	40235189	RING	SE-9	1

PACKING

#	02789056	PAD ADAPTOR		1
#	02454623	PAD L		1
#	02454634	PAD R		1
#	02454612	PACKING CASE		1
#	02673589	OUTER PACKING CASE		1

MISCELLANEOUS

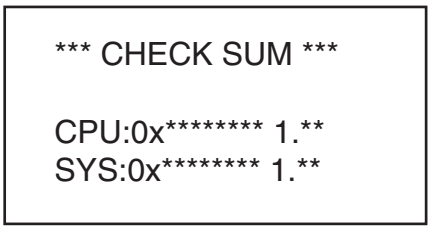
	40122645	NITTO FILAMENT TAPE	#3883 W19MM 50M 60P (CM)	1
	22365714	CORD HOOK		1
	02236489	FOOT	14.5X14.5	4
	40344445	LABEL FCC CAUTION		1
	40347767	LABEL	SMARTMEDIA	1
#	02891123	LEAF	SPRING SW-MAIN L	1
#	02893334	LEAF	SPRING SW-MAIN S	2
	02780878	LEAF SPRING 3		4
#	02891134	LEAF	SW-EARTH	1

ACCESSORIES (STANDARD)

⚠	01786212	AC ADAPTOR	BRC-100T	1
⚠	01786223	AC ADAPTOR	BRC-120T	1
⚠	01786234	AC ADAPTOR	BRC-230T	1
⚠	01786245	AC ADAPTOR	BRC-240AT	1
#	71788234	OWNERS MANUAL SET	JAPANESE	1
#	71897778	OWNERS MANUAL SET	ENGLISH	1
	40232334	WARRANTY CARD	MOCHIKOMI JAPAN ONLY	1

CHECKING THE VERSION NUMBER

Turn on the SP-505 while pressing the [EXIT] and [ENTER] buttons.
CPU Version number and Checksum, SYSTEM Version number and Checksum are displayed.



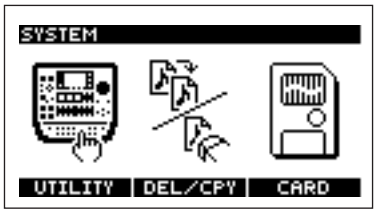
USERS DATA SAVE AND LOAD

SAVING DATA ON A MEMORY CARD (SAVE)

Saving sample data

Here's how to save sample data from the SP-505's internal memory to a memory card.

1. Press [SONG] button or [PTN] to display the Play screen.
2. Press [SYSTEM] button to display the System screen.



* *It is not possible to display the System screen while a pattern or song is playing.*

3. Press [F3] (CARD).
4. Press [F3] (SAVE).

* *If the memory card has been formatted in a format that cannot be used by the SP-505, "SAVE" will not appear above [F3].*
Please format the card.

5. Press [F1] (SAMPLE).
Each pad bank in the SP-505's internal memory will be saved as one set.

* *When you save the all data, please repeate the action 5 to 8.*

6. Use the VALUE dial to select the pad bank that you want to save.

7. Press CURSOR [V], and use the VALUE dial to select the number of the area in which you want to save.
8. To save the data, press [F1] (EXECUTE).
To cancel, press [F2] (CANCEL).

* *An asterisk "*" will be displayed to indicate an area number in which sample data has already been saved.*
If you select an area number marked by "*", a message of "OK to Overwrite?" will be displayed.
If you are sure this is the area number you want to use, press [F1] (YES).
To cancel, press [F2] (NO).

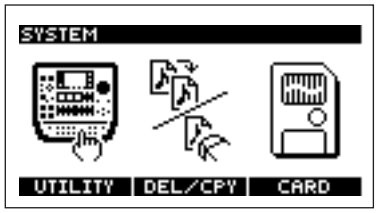
9. Press [SONG] or [PTN] to return to the Play screen.

Never turn off the power while the display indicates "Keep Power On!"

Saving Sequencer Data

Here's how to save sequencer data (patterns/songs) from the SP-505's internal memory to a memory card.

1. Press [SONG] or [PTN] to display the Play screen.
2. Press [SYSTEM] to display the System screen.



* *It is not possible to display the System screen while a pattern or song is playing.*

3. Press [F3] (CARD).
4. Press [F3] (SAVE).

* *If the memory card has been formatted in a format that cannot be used by the SP-505, "SAVE" will not appear above [F3].*
Please format the card.

5. Press [F2] (SONG/PTN).
For sequencer (pattern/song) data, the 100 user patterns and 20 songs in internal memory will be saved as one set.
6. Use the VALUE dial to select the number of the area in which you want to save.

7. To save the data, press [F1] (EXECUTE).
To cancel, press [F2] (CANCEL).

* *An asterisk "*" will be displayed to indicate an area number in which sequencer data has already been saved.*
If you select an area number marked by "*", a message of "OK to Overwrite?" will be displayed.
If you are sure this is the area number you want to use, press [F1] (YES).
To cancel, press [F2] (NO).

8. Press [SONG] or [PTN] to return to the Play screen.

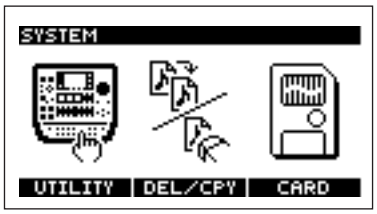
* *Never turn off the power while the display indicates "Keep Power On!"*

LOADING MEMORY CARD DATA INTO INTERNAL MEMORY (LOAD)

Loading sample data

Here's how sample data saved on a memory card can be loaded into the SP-505.

1. Press [SONG] or [PTN] to display the Play screen.
2. Press [SYSTEM] to display the System screen.



* *It is not possible to display the System screen while a pattern or song is playing.*

3. Press [F3] (CARD).

* *If a memory card is not inserted, "CARD" will not appear above [F3].*

4. Press [F2] (LOAD).

* *If the memory card has been formatted in a format that cannot be read by the SP-505, "LOAD" will not appear above [F2].*
Please format the card.

5. Press [F1] (SAMPLE).

6. Use the VALUE dial to select the number of the area that you want to load.
One bank of the SP-505's internal memory will be loaded as a set.
If no files have been saved, the display will indicate "******".
7. Press CURSOR [V] to move the cursor to the pad bank display.
8. Use the VALUE dial to select the pad bank that you want to load.
9. To load the data, press [F1] (EXECUTE).
To cancel, press [F2] (CANCEL).

* *When you load some data, please repeate the action 5 to 8.*

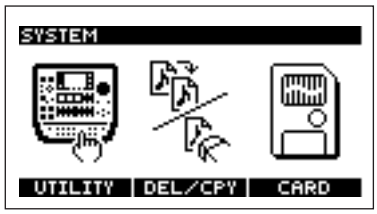
10. Press [SONG] or [PTN] to return to the Play screen.

* *When you load, the sample and sequencer data saved in internal memory will be erased.*
Be sure to save important data on a memory card before you load.
Never turn off the power while the display indicates "Keep Power On!"

Loading sequencer data

Sample and sequencer (pattern/song) data that you've saved on a memory card can be loaded back into the SP-505 as follows.

1. Press [SONG] or [PTN] to display the Play screen.
2. Press [SYSTEM] to display the System screen.



* *It is not possible to display the System screen while a pattern or song is playing.*

3. Press [F3] (CARD).

* *If a memory card is not inserted, "CARD" will not appear above [F3].*

4. Press [F2] (LOAD).

* *If the memory card has been formatted in a format that cannot be read by the SP-505, "LOAD" will not appear above [F2].*
Please format the card.

5. Press [F2] (SONG/PTN).

6. Use the VALUE dial to select the number of the area that is to be loaded.
If no files have been saved, the display will indicate "******".
7. To load the data, press [F1] (EXECUTE).
To cancel, press [F2] (CANCEL).
8. Press [SONG] or [PTN] to return to the Play screen.

* *When you load, the sample and sequencer data in internal memory will be erased.*
Be sure to save important data on a memory card before you load.

Never turn off the power while the display indicates "Keep Power On!"

RESTORING THE FACTORY SETTINGS

Use the Initialize operation when you want to restore the system and pattern data to the factory settings. You can restore all data to the factory settings at once, or select a specific type of data, such as sequencer settings, to be initialized.

Factory settings

Samples

All pad samples are empty (except for preset samples).

Sequencer (songs/patterns)

All songs are empty.
All user patterns are empty.

System

UTILITY CONFIG

LCD Contrast: 6
Pad Protect: (BANK 5-16), OFF
Metronome LV: 10
Foot SW Asgn: PLAY
Chop Demo: ON
Pitch Demo: ON
Power Up PTN: PRESET
Power Up BNK: PRESET

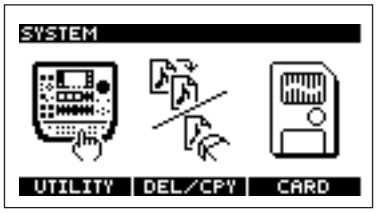
UTILITY MIDI

Pads Ch: 1
Part 1-4 Ch: OFF
Prog Chg SW: ON
Sync Mode: AUTO

Procedure

1. Press [SONG] or [PTN] to display the Play screen.

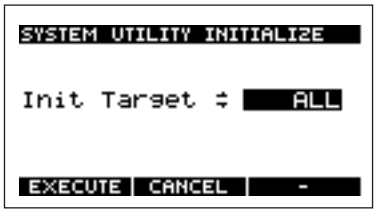
2. Press [SYSTEM] to display the System screen.



* *It is not possible to display the System screen while a pattern or song is playing.*

3. Press [F1] (UTILITY).

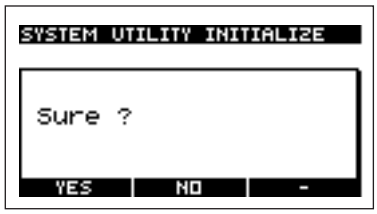
4. Press [F3] (INIT).
The Initialize screen will appear.



5. Use the VALUE dial to select the type of setting that you want to initialize.
Init Target: ALL, SYSTEM, SAMPLE, SEQ

ALL:	All system-related parameters will be initialized. All pad samples will be erased. (Except for preset samples) All songs and all user patterns will be erased.
SYSTEM:	System-related parameters will be initialized.
SAMPLE:	All pad samples will be erased. (Except for preset samples)
SEQ:	All songs and all user patterns will be erased.

6. To initialize the settings you selected, press [F1] (EXECUTE).
To cancel, press [F2] (CANCEL) or [EXIT].
When you press [F1] (EXECUTE), a screen asking you to confirm that you indeed do want to carry out an initialization appears.



* *If you attempt to initialize SAMPLE when sample memory is protected, the display will ask "Protected! Sure?".*

7. To initialize the settings, press [F1] (YES). To cancel, press [F2] (NO)

8. Press [PTN] or [SONG] to return to the Play screen.
Never turn off the power while the display indicates "Keep Power On!"

SYSTEM SOFTWARE UPDATE PROCEDURE

The SP-505 can be updated in two ways, Updating by SmartMedia and Updating by SMF.
However, when updating the SP-505, the user data are all initialized.
When updating, save user area data on the SmartMedia by using [SAVING USER DATASAVING AND LOADING] in this service note.

Notes

Do not turn off the SP-505 while updating.
The contents of the flash ROM may be damaged and the SP-505 will stop functioning.
In this case, update again using the following [Updating by SmartMedia] procedure below.

Updating by SMF

Required Items

- Floppy disk for updating (P/No. 17041086)
- MIDI cable
- MIDI sequencer
  (For MIDI sequencer, use SMF data playbackables such as the MC-80.)

The following SMF data are saved on the disk.

SP-505 SYSTEM VER 1.**
_00001.MID
_00002.MID
_00003.MID
_00004.MID
_00005.MID
_00006.MID
_00007.MID
_00008.MID
_00009.MID
_00010.MID
_00011.MID
_00012.MID
_00013.MID
_00014.MID
_00015.MID

Perform the following procedure when updating with MIDI.

1. Save user area data on the SmartMedia by using [USERS DATA SAVE AND LOAD] in this service note.
2. Connect MIDI OUT if the MIDI sequencer can playback SMF data and SP-505 MIDI IN by MIDI cable.
3. Turn on the power while pressing the [F1], [F2] and [F3] buttons.
4. After "MIDI UPDATER" is displayed, it enters the data receiving waiting condition.
5. Insert the delivered 3.5 inch disk (P/No. 17041086) for updating into the MIDI sequencer.
   Playback "_00001.MID" from the MIDI sequencer.
6. When updating is completed, SSUM and the TSUM are displayed.

```
MIDI UPDATER
ADRS SSUM TSUM
1EFE ****  ****
```

7. Turn off the power.
   Turn on the power while pressing the [ENTER] and [EXIT] buttons.
8. Checking the Checksum, and Turn off the power.
9. After all procedures are completed, load user data by using [Loading Momory card data in into internal Memory].

Updating by SmartMedia

Required Items

- Update & factory data card for Service (P/No. 17041085)

Perform the following procedure when updating with SmartMedia.

1. Save user area data on the SmartMedia by using [USERS DATA SAVE AND LOAD] in this service note.
2. Insert the delivered SmartMedia (P/No. 17041085) for updating into the SP-505.
3. Turn on the power while pressing the [SONG], [PTN] and [BPM] buttons.
4. It will be automatically updated when the SmartMedia is recognized.
5. When updating is completed, "Complete!!" is displayed.

```
CARD UPDATER


-- Complete!! --
```

6. Turn off the power.
   Turn on the power while pressing the [ENTER] and [EXIT] buttons.
7. After checking the Checksum number, turn off the power and remove the SmartMedia from the SP-505.
8. After all procedures are completed, load user sample and pattern data by using [Loading Memory Card Data Into Internal Memory].

TEST MODE

0. contents

1.Required Items

1. Foot Switch (FS-5U etc)
2. MIDI Cable
3. Oscillator
4. Oscilloscope
5. Noise Meter
6. An Instrument with a DIGITAL OUT (OPTICAL/COAXIAL) such as a CD player or BR-8, BR-532,VF-1,VS-840(EX/GX)
   *The instrument must have a digital signal output for a sampling rate of 44.1kHz.
7. SmartMedia 1 (Update & factory data card for Service (P/No.17041085) supplied by the service center)
8. SmartMedia 2 (3.3V product, initialized with more than 8MB available space)

2. Test items list

[1] DEVICE CHECK

Displays the version and checks each device (CPU, DRAM, NAND FLASH, FLASH ROM and Gate Array).

[2] PRESET LOAD

Loads the preset data (PRESET BANK 1-4 and USER BANK 1).
If user data exists in the USER BANK 1, follow the procedure in "Saving and loading data", and backup the data.

[3] SW & LED CHECK

Checks the switches (including the FOOTSW) and the LEDs.

[4] CONTROL KNOB CHECK

Checks the control knobs ([CTRL 1]-[CTRL 3]).

[5] ENCODER CHECK

Checks the encoder (the [VALUE] knob).

[6] LCD CHECK

Checks the LCD display.

[7] LINE IN CHECK

Checks the LINE IN jacks.

[8] PHONES CHECK

Checks the PHONES jack.

[9] MIC CHECK

Checks the MIC jack.

[10] DIGITAL IN CHECK

Checks the DIGITAL IN jacks (COAXIAL and OPTICAL).

[11] MIDI CHECK

Checks the MIDI IN/OUT connectors.

[12] MEMORY CARD CHECK

Checks the write-protect switch of the SmartMedia and READ/WRITE/VERIFY.

3. Test mode types and how to enter each test mode

Test mode types

1. Full-line test

Performs all items of the test mode.

To enter the test mode, turn the SP-505's power on while pressing the [WAVE ZOOM IN] and [PAD BANK] keys.
Continue pressing the [WAVE ZOOM IN] and [PAD BANK] keys until the test mode display appears.

* *To load preset data, insert the SmartMedia on which it is stored while the power is off.*

2. Half-line test (latter half)

Performs the later half of the test mode. ([7]-[12])

To enter the test mode, turn the unit's power on while pressing the [WAVE ZOOM IN] and [CLIP BOARD] keys.
Continue pressing the [WAVE ZOOM IN] and [CLIP BOARD] keys until the test mode display appears.

3. Individual tests

Selects each item of the test mode, and tests it individually.

To enter the test mode, turn the unit's power on while pressing the [WAVE ZOOM IN] and [CHOP] keys.
Continue pressing the [WAVE ZOOM IN] and [CHOP] keys until the test mode display appears.
Select the test items either by turning the encoder or pressing the [PAD1]-[PAD12] pads.

* *To load preset data, insert the SmartMedia on which it is stored while the power is off.*

4. Switch operations during the test mode

- Test mode complete :Power OFF
- To the previous test item : CURSOR L (EXIT + CURSOR L for SW & LED CHECK)
- To the next test item :CURSOR R (EXIT + CURSOR R for SW & LED CHECK)
- Retest : ENTER (EXIT + ENTER for SW & LED CHECK)
- To exit the error display: EXIT
- To exit the test item : EXIT or CURSOR R (EXIT + CURSOR R for SW & LED CHECK) (individual tests only)

5. Test contents

[1] DEVICE CHECK

Confirm the displayed version number and check sum.
Memory and the device tests are automatically performed.
Confirm that the system proceeds to the next test item without error.
The contents are displayed when an error occurs. (See the error message list)

[2] PRESET LOAD

To load preset data, insert the SmartMedia on which it is stored into the memory card slot while the power is off.
The preset data is loaded automatically.
If the preset data was already loaded during a full-line test, this item is skipped.

* *Make sure that the SmartMedia with the preset data has a write-protect sticker affixed.*
If there is no write-protect sticker, the data cannot be loaded.

* *Loading of the preset data overwrites the data stored in USER BANK 1.*
Follow the procedures in "USERS DATA SAVE AND LOAD", and backup the user data.

[3] SW & LED CHECK

Confirm that all 31 LEDs of the following keys and source indicators come on.

Keys with LEDs
[SAMPLING], [RESAMPLE], [PART 1]-[PART 4], [PLAY], [REC], [FX ON/OFF], [CLIP BOARD], [PAD1]-[PAD16] and [EXT SOURCE]

Source indicators
LINE, COAXIAL, OPTICAL and MIC

Press the [SOURCE SELECT] key and confirm that the source indicator LEDs go off one at a time from the top down.
Confirm that when the unit recognizes a key operation, the key displayed on the LCD changes from " ■ " to " □ ".

Press another key.
Confirm that when the unit recognizes a key operation, the key displayed on the LCD changes from " ■ " to " □ ".
Confirm that when a key with an LED is recognized, the LED goes off.

Lastly, connect a foot switch and press the pedal.
When all keys and the foot switch are recognized, the system automatically proceeds to the next test.

[4] CONTROL KNOB CHECK

Turn [CTRL 1] to MIN, then to MAX.
Values from 0 to 127 are displayed on the LCD.
When the system recognizes the movement from MIN (0) to MAX (127), "OK" is displayed on the LCD.
Perform the same for [CTRL2] and [CTRL3].

If no knob error occurs for [CTRL 1] to [CTRL 3], the system automatically proceeds to the next test.

[5] ENCODER CHECK

Turn the encoder clockwise.

When the knob is fully turned until the meter displayed on the LCD reaches MAX, "OK" is displayed.

Then, turn it counterclockwise.

When the system confirms that the meters have fully flilled in both directions, it automatically proceeds to the next test.

[6] LCD CHECK

Confirm that the contrast becomes lighter when the encoder is turned counterclockwise.

Confirm that the contrast becomes darker when the encoder is turned clockwise.

Confirm that all displays go off when the [CURSOR R] key is pressed.

Pressing the [CURSOR R] key displays the entire screen in black.

Confirm that all dots function and that they are even.

If there is no anomaly, press the [CURSOR R] key and proceed to the next test.

[7] LINE IN CHECK

Connect a noise meter to the LINE OUT jack and measure the noise level.

Turn both [VOLUME] and [REC LEVEL] knobs to MAX.

L/R -65dBm or below (IHF-A)

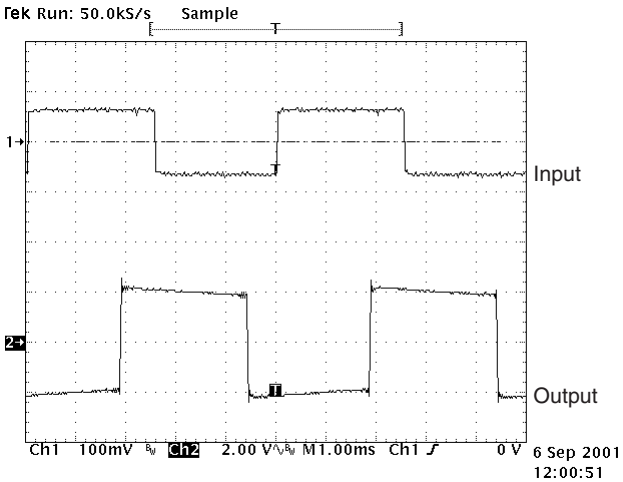
Connect a monitor speaker (MA-10A, etc.) to the LINE OUT jack, and confirm that there is no poor contact when the [VOLUME] and [REC LEVEL] knobs are turned right and left.

Connect an oscilloscope to the LINE OUT jack so that the output waveform can be observed.

Turn both [VOLUME] and [REC LEVEL] knobs to 'MAX'.

Connect an oscllllator to the LINE IN jack and input a 200Hz, 150mVp-p square wave, then confirm that there is no anomaly in the waveform displayed.

Confirm that the waveform changes smoothly when the [VOLUME] and [REC LEVEL] knobs are turned.



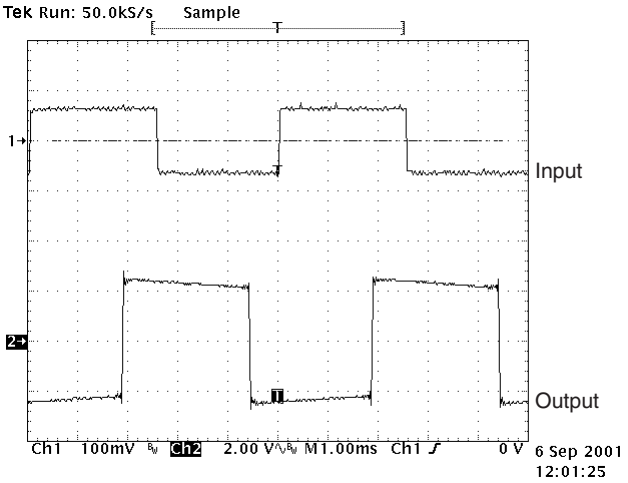
If there is no anomaly, press the [CURSOR R] key and proceed to the next test.

[8] PHONES CHECK

Connect an oscilloscope to the PHONES jack so that the output waveform can be observed.

Turn both [VOLUME] and [REC LEVEL] knobs to 'MAX'.

Connect an oscillator to the LINE IN jack and input a 200Hz, 150mVp-p square wave, then confirm that there is no anomaly in the waveform displayed.



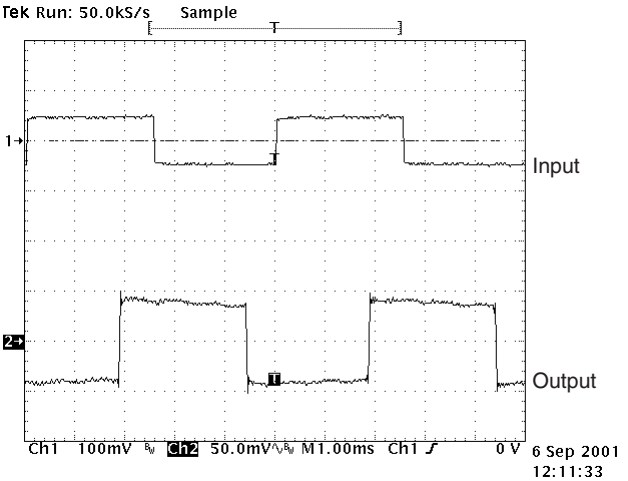
If there is no anomaly, press the [CURSOR R] key and proceed to the next test.

[9] MIC CHECK

Connect an oscilloscope to the LINE OUT jack so that the output waveform can be observed.

Turn the [VOLUME] knob to 'MAX' and the [REC LEVEL] to the center.

Connect an oscillator to the MIC jack and input a 200Hz, 100mVp-p square wave, then confirm that there is no anomaly in the waveform displayed.



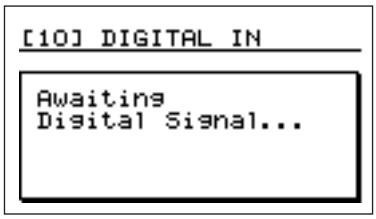
If there is no anomaly, press the [CURSOR R] key and proceed to the next test.

[10] DIGITAL IN CHECK

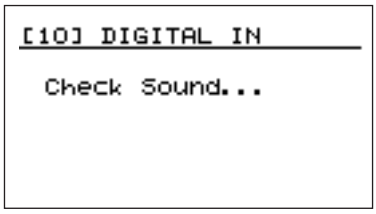
It takes awhile for the system to recognize the digital signal for this test.

"Awaiting Digital Signal..." is displayed until the signal is recognized.

So after connecting digital equipment, wait for awhile.



Confirm that “Awaiting Digital Signal...” is displayed, then connect digital equipment that has an OPTICAL output such as a CD player.
After awhile, “Check Sound...” will be displayed.
If no abnormal sound is heard, press the [SOURCE SELECT] key.

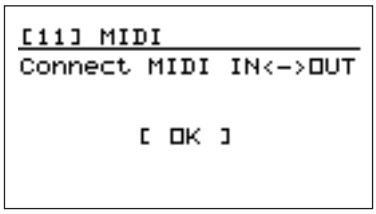


Confirm that “Awaiting Digital Signal...” is displayed, then connect digital equipment that has a COAXIAL output.
After awhile, “Check Sound...” will be displayed.
Confirm that no abnormal sound is heard.

If there is no anomaly, press the [CURSOR R] key.
The unit will display “Awaiting Digital Signal...” for awhile, then proceed to the next test.

[11] MIDI CHECK

Connect the MIDI IN and MIDI OUT connectors with a cable.



If no error occurs, “OK” is displayed and the system automatically proceeds to the next test.

[12] MEMORY CARD CHECK

Confirm that “Insert Card” is displayed, and insert a SmartMedia card with a write-protect sticker affixed into the memory card slot.
Confirm that “Protected.” is displayed.

Next, prepare a SmartMedia formatted with SP-505.
Confirm that there is no write-protect sticker on the SmartMedia and insert it into the memory card slot.
The READ/WRITE/VERIFY check and test mode are completed.

Confirm that “Test Mode Completed!” is displayed, and turn off the power.

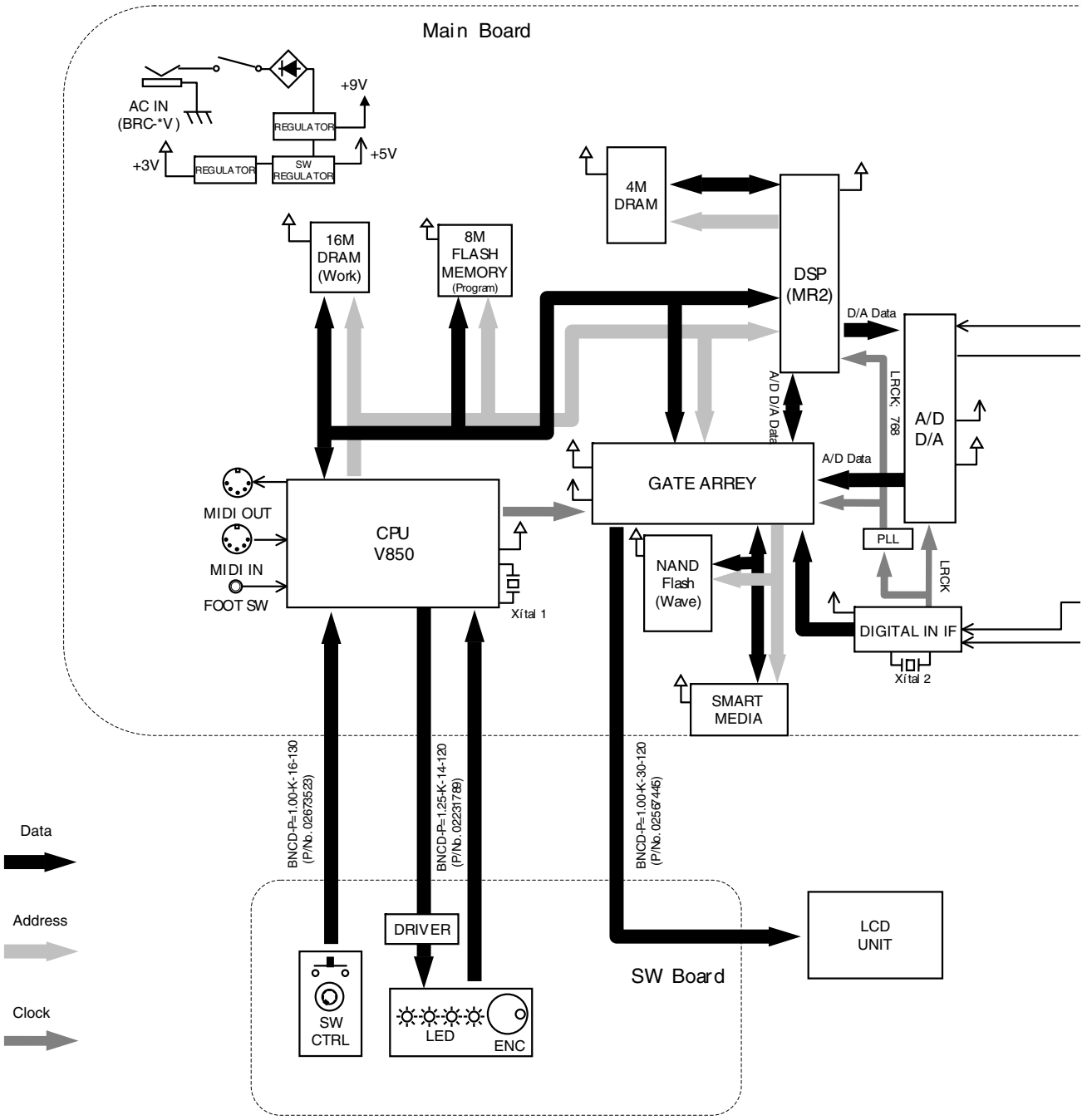
[13] MUTE CHECK

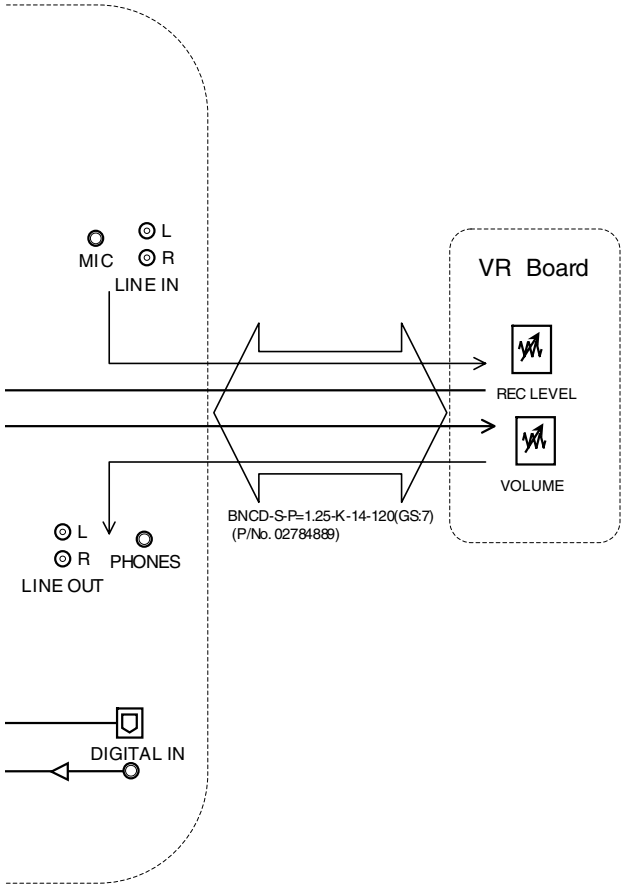
Turn the power on while pressing [PAD15] repeatedly.
Confirm that “HIP-HOP01” is displayed and that sounds come out.

Press the [PLAY] key and confirm that the demo is played.

This completes the test mode. Turn off the power.

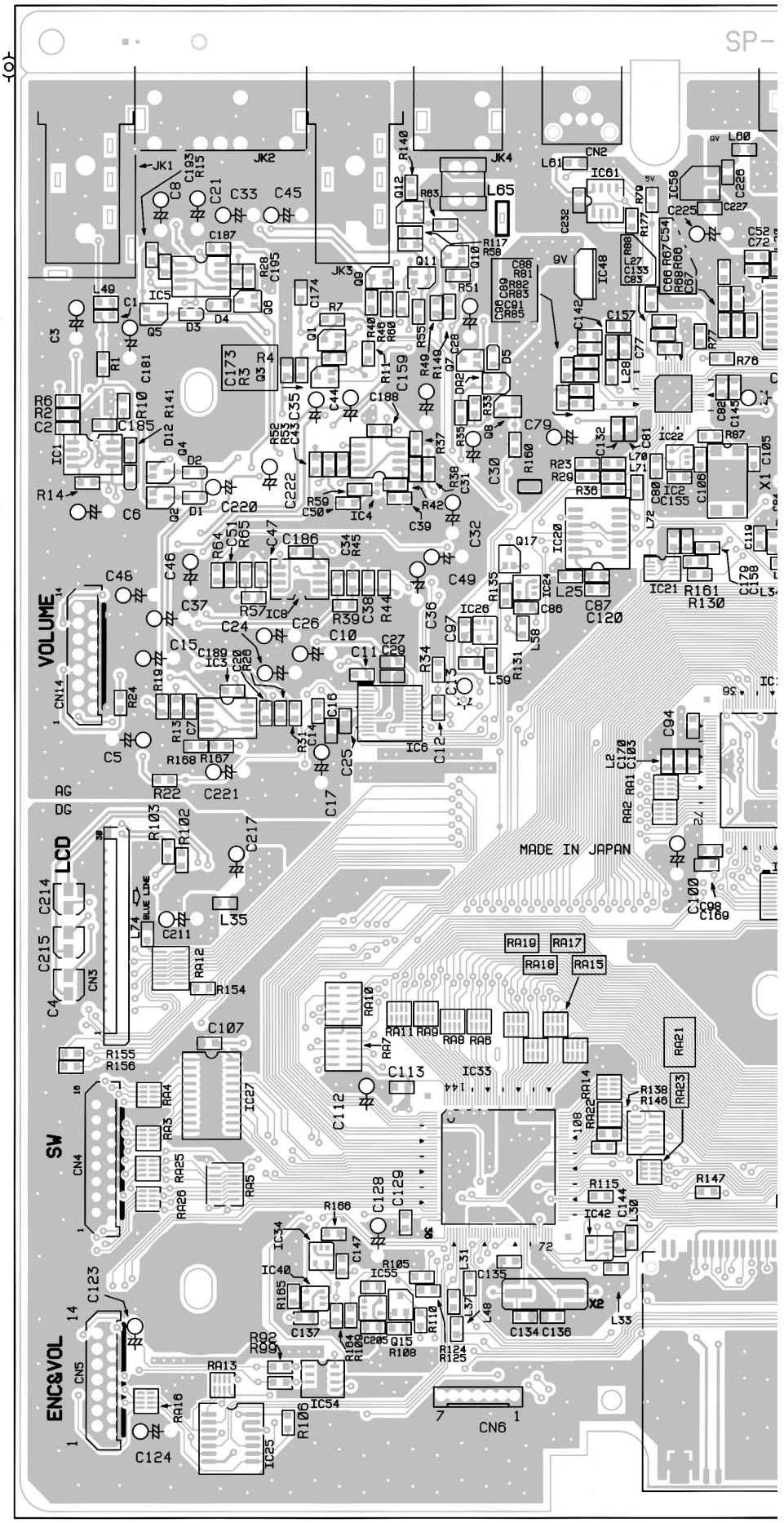
BLOCK DIAGRAM

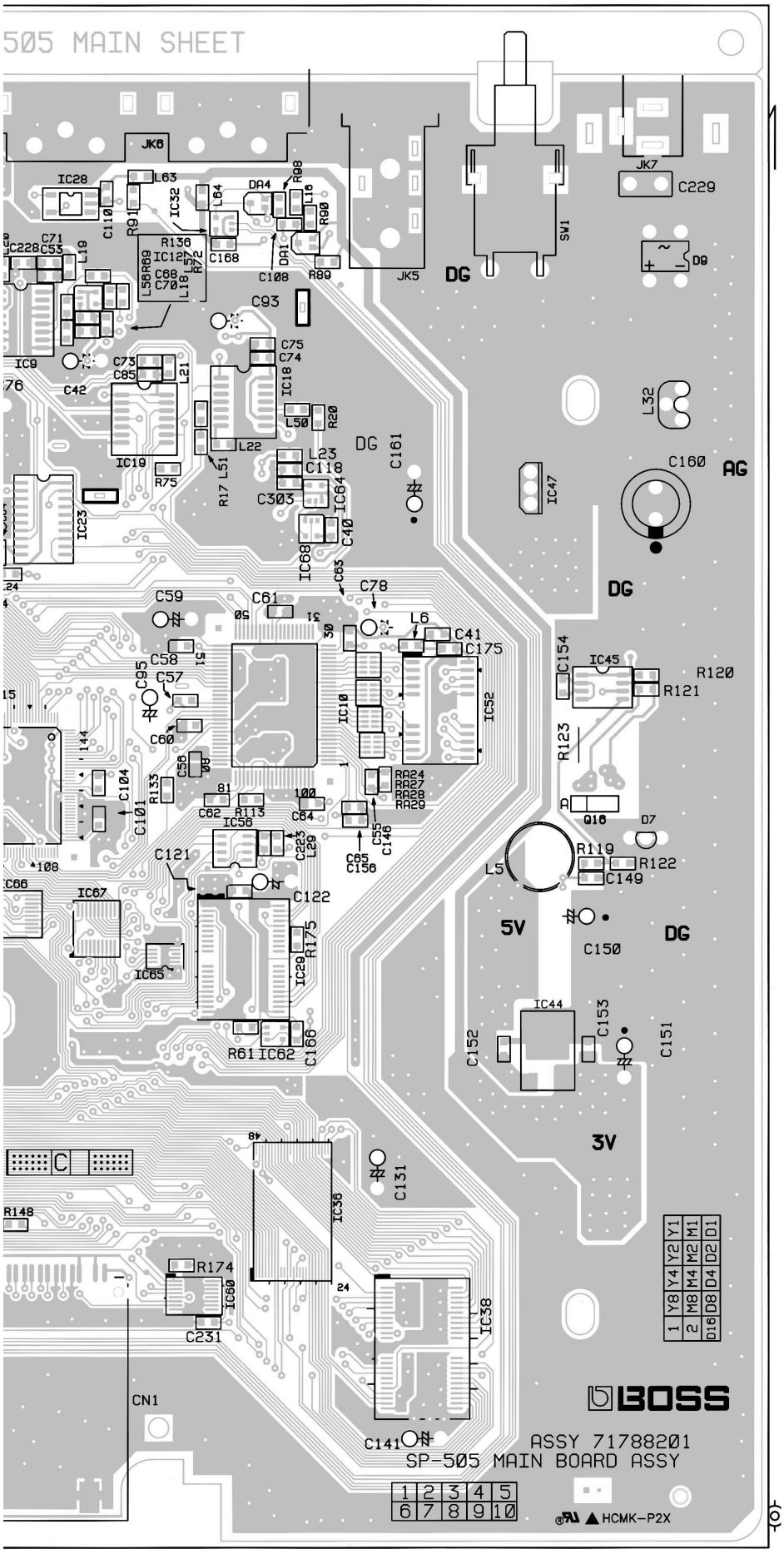



MIC
L
R
LINE IN
VR Board
REC LEVEL
VOLUME
BNCD-S-P=1.25-K-14-120(GS:7)
(P/No. 0278489)
L
R
PHONES
LINE OUT
DIGITAL IN

CIRCUIT BOARD (MAIN BOARD ASSY)

Up to
Serial No. ZP239739

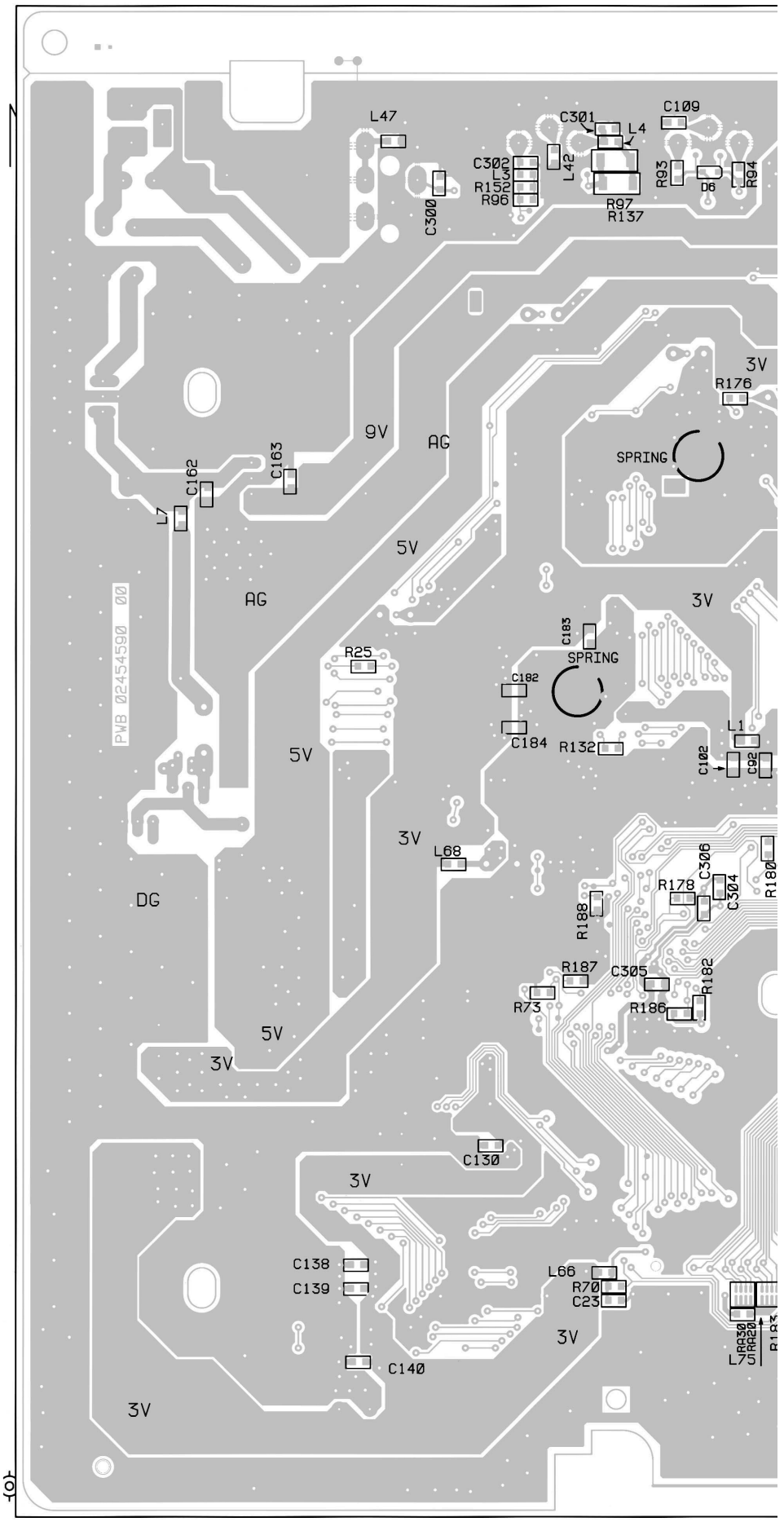


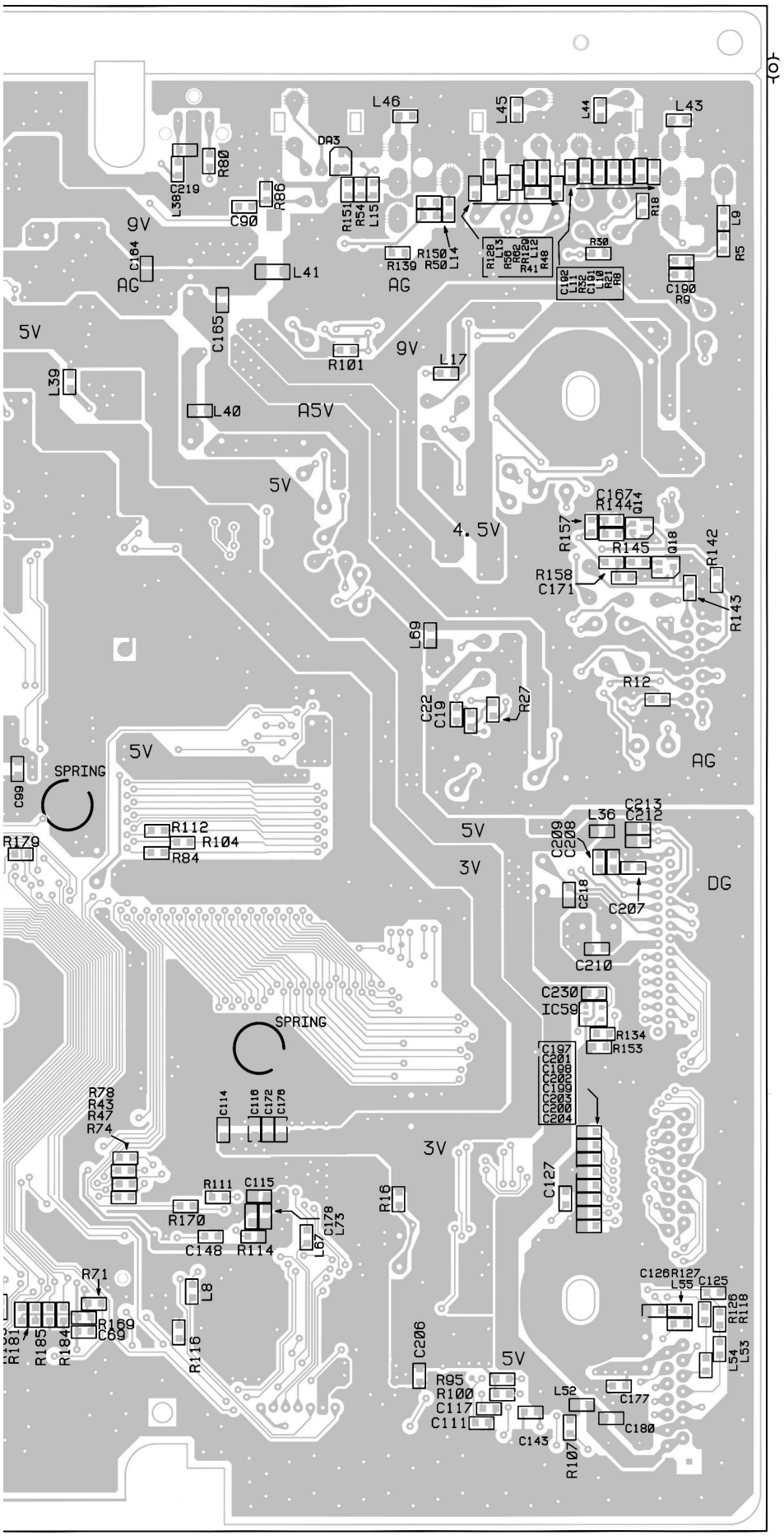


View from component side

CIRCUIT BOARD (MAIN BOARD ASSY)

Up to
Serial No. ZP239739

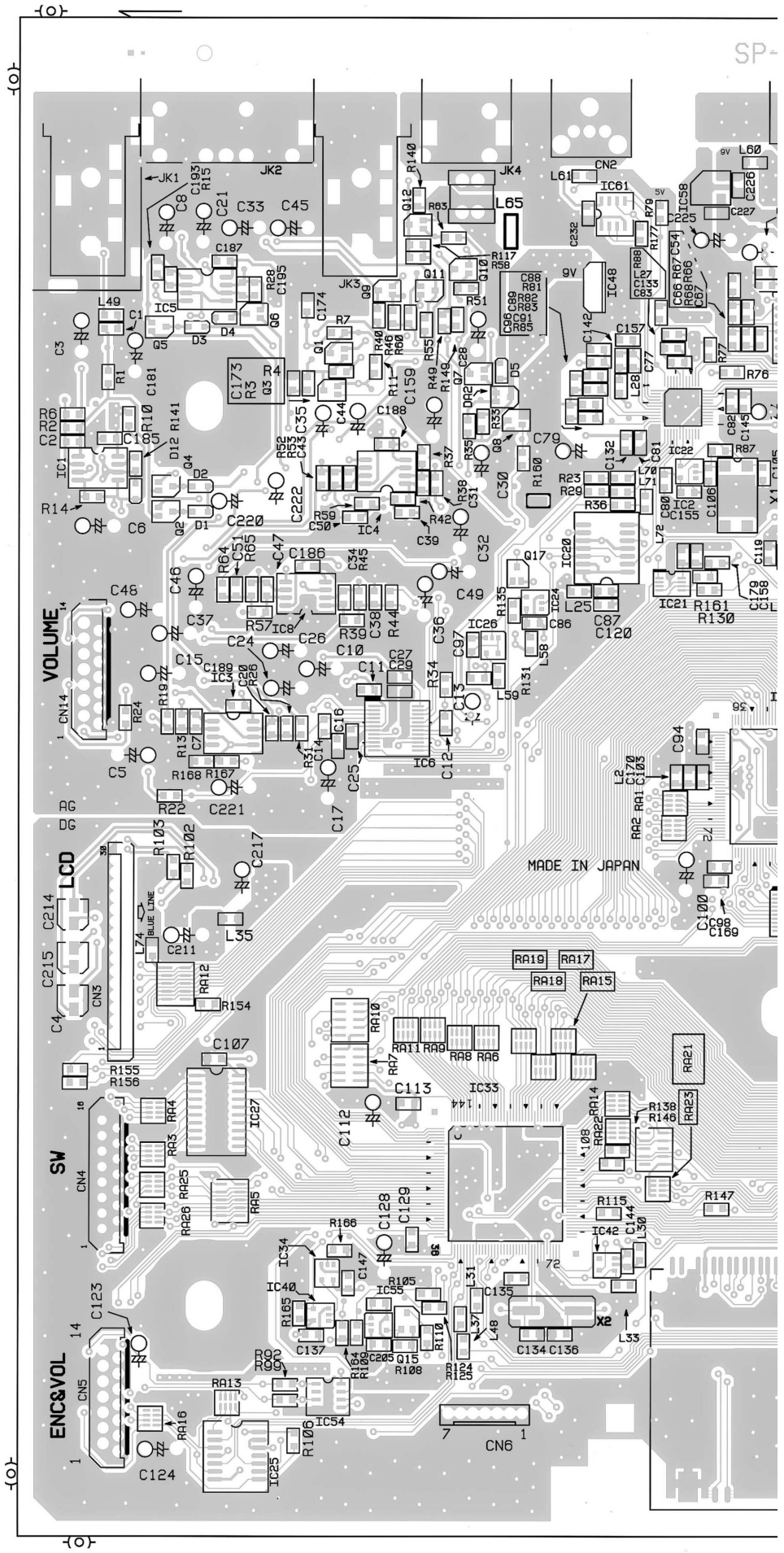


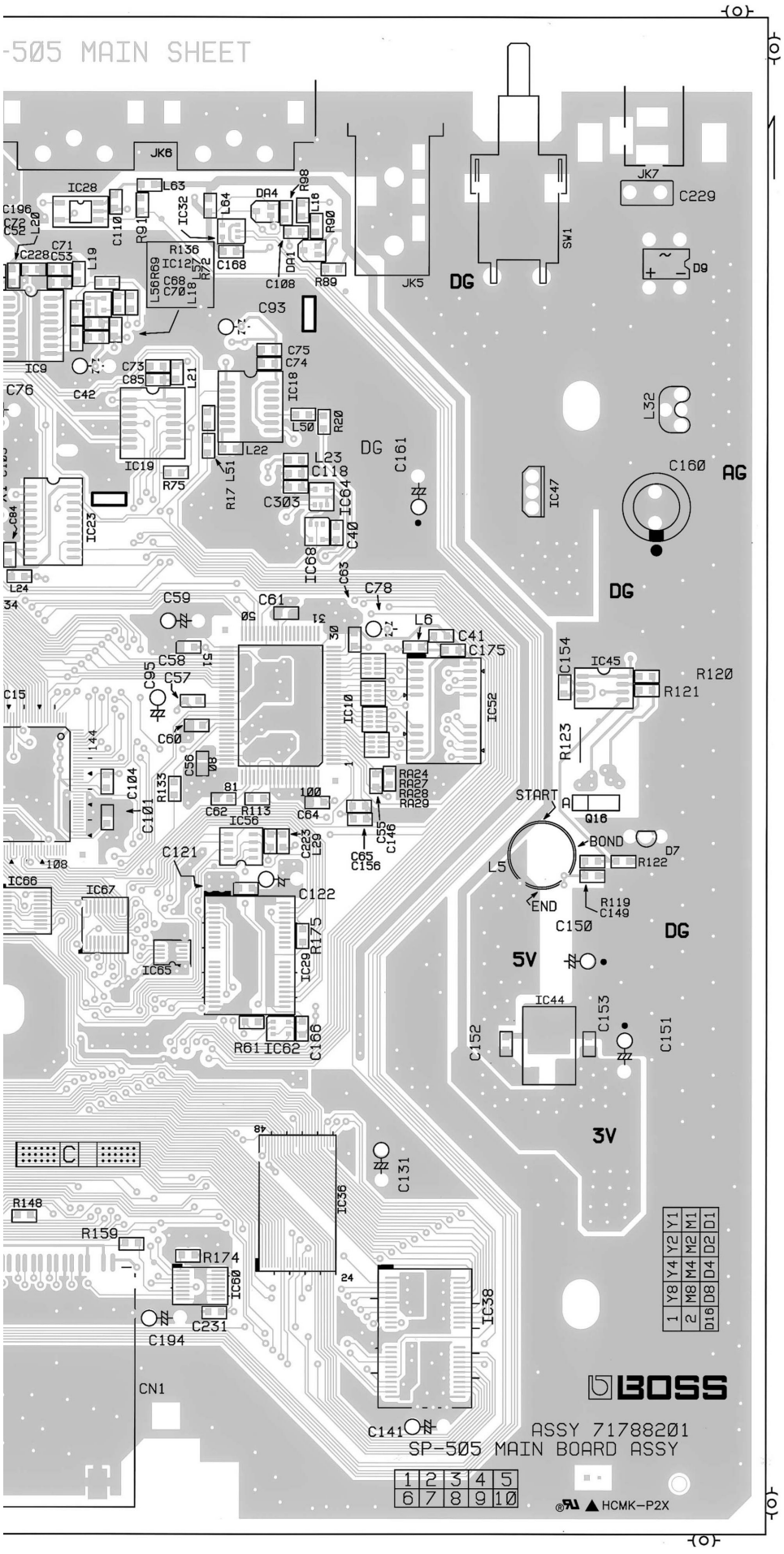


View from foil side

CIRCUIT BOARD (MAIN BOARD ASSY)

From
Serial No. ZP239740

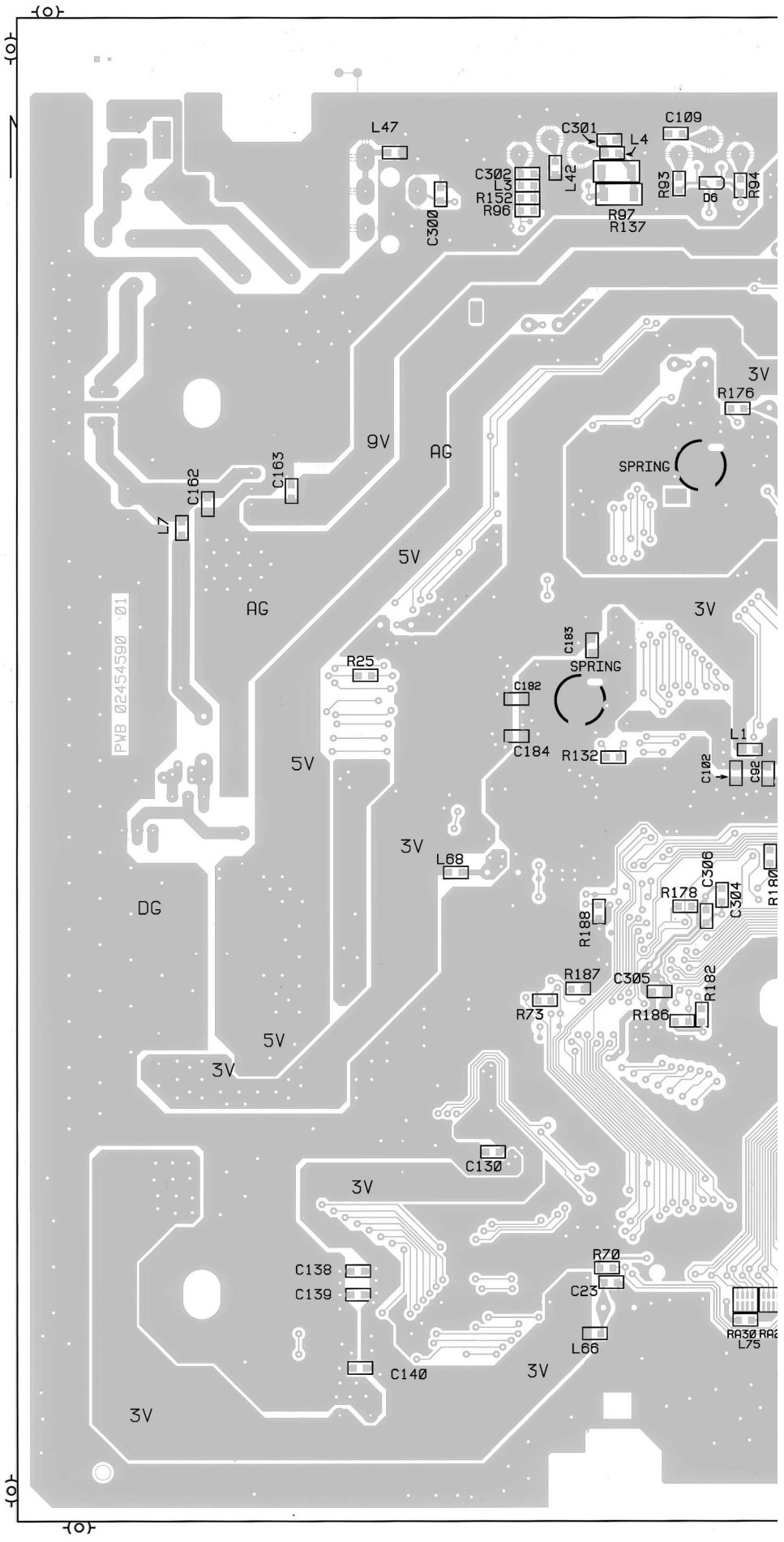


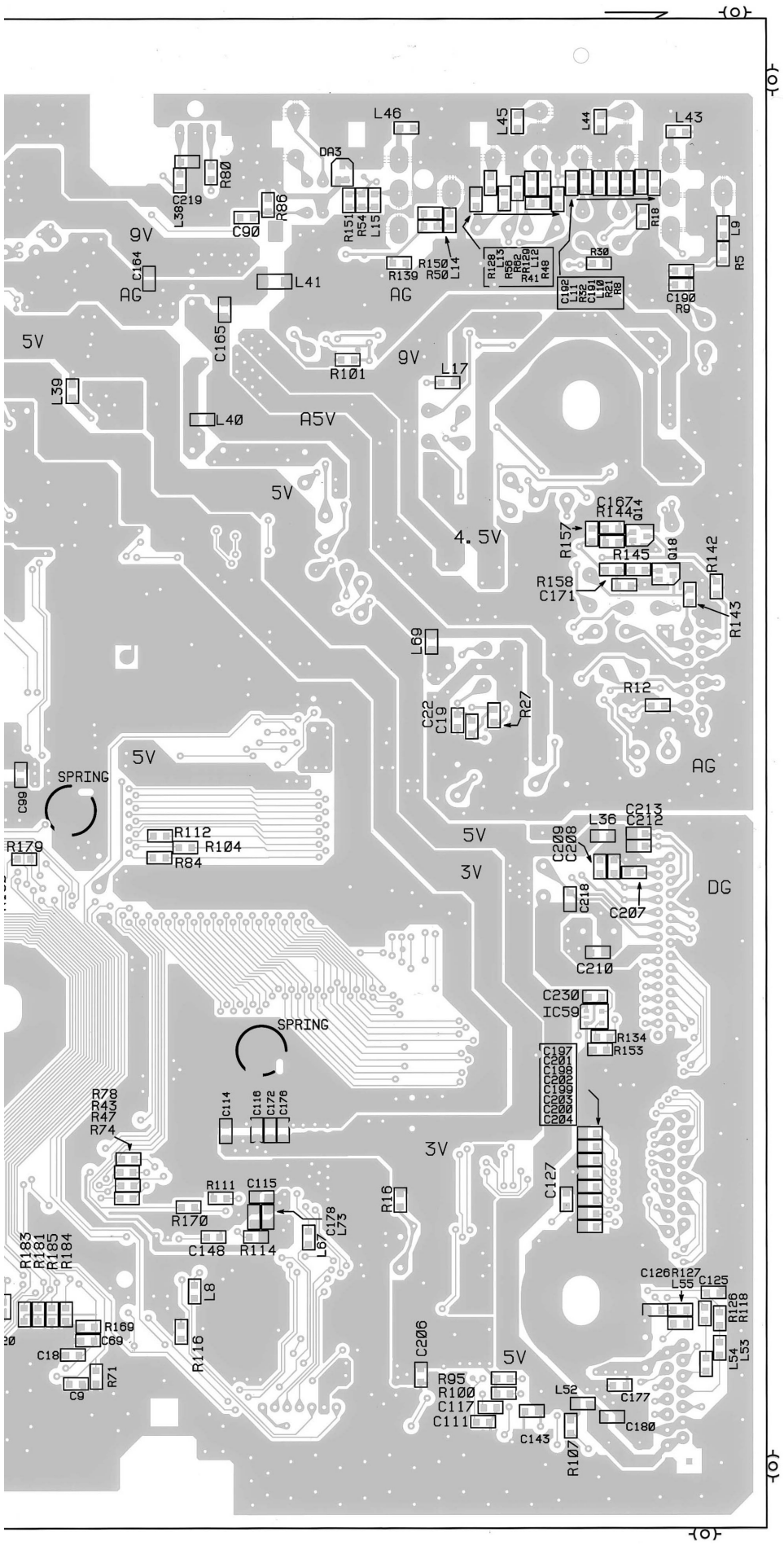


View from component side

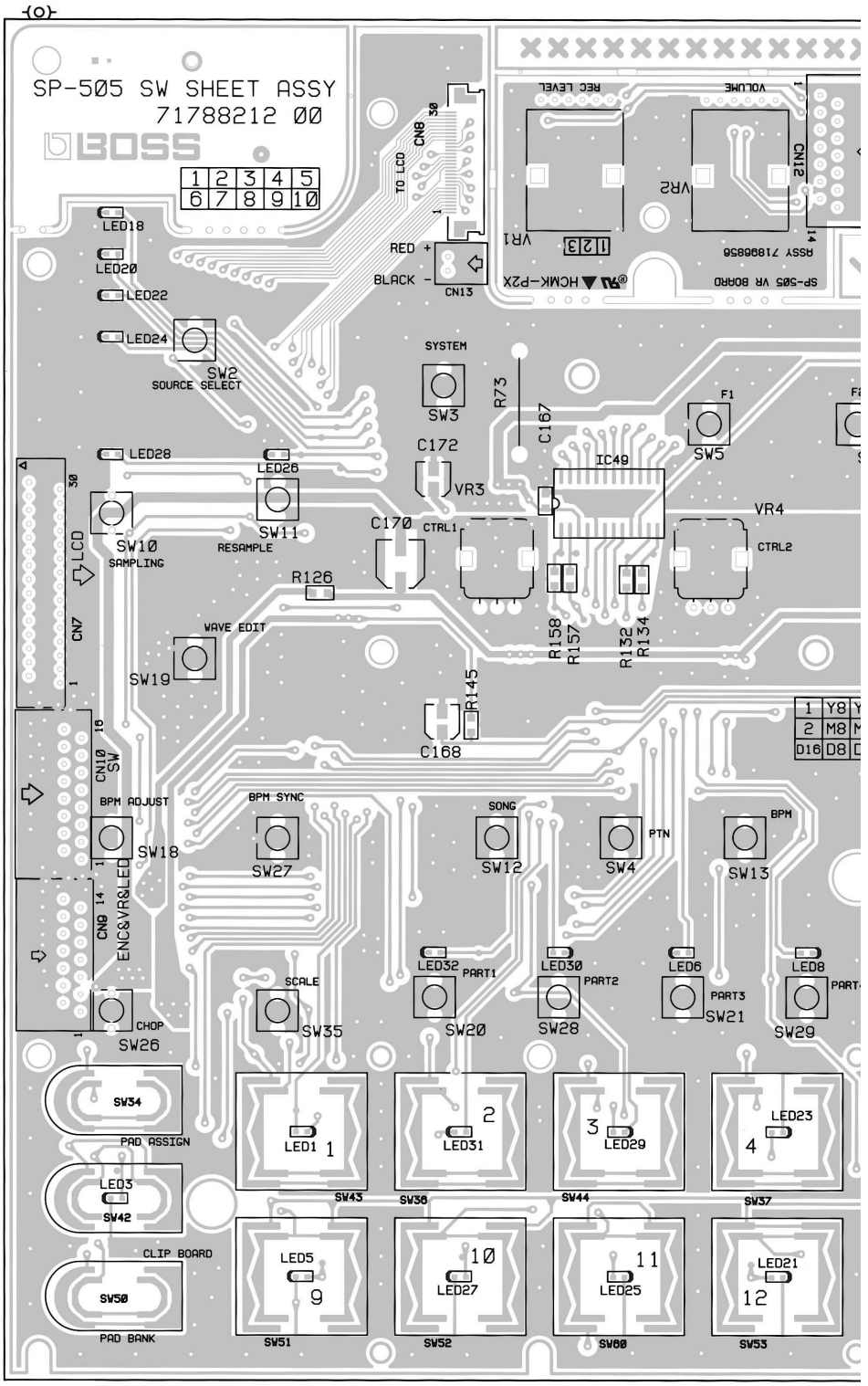
CIRCUIT BOARD (MAIN BOARD ASSY)

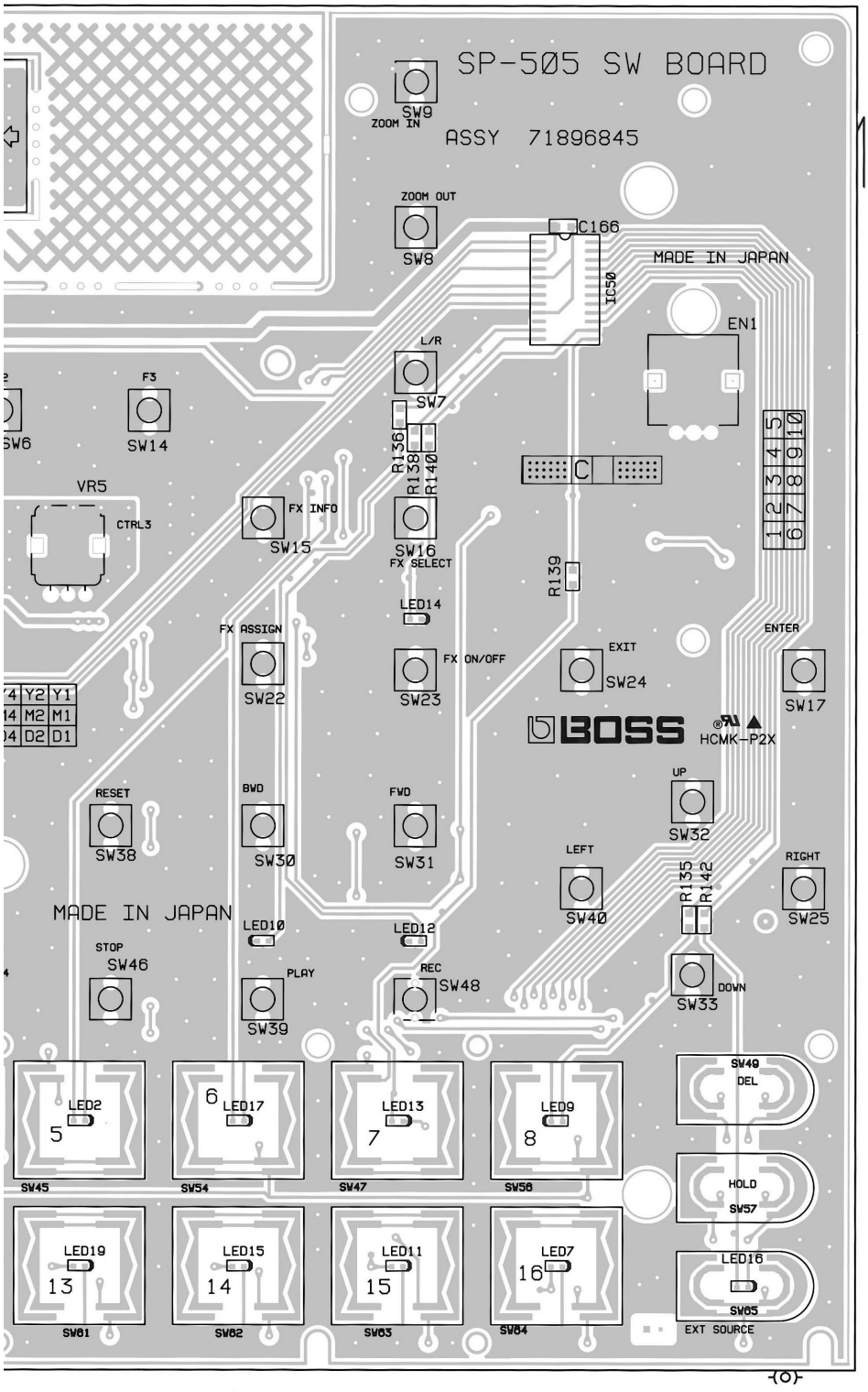
From
Serial No. ZP239740




L46
L45
L44
L43
DA3
R80
L38
C219
R86
C90
R151
R54
L15
R150
R50
L14
R139
R128
L13
R56
R82
R129
L12
R41
R48
R30
R18
L9
R5
C192
L11
R55
C191
L10
R21
R8
C190
R9
C164
AG
L41
9V
C165
5V
R101
L39
L40
A5V
L17
C167
R144
Q14
R157
R145
Q18
R142
R158
C171
R143
L69
C22
C19
R27
R12
4.5V
SPRING
C99
R179
R112
R104
R84
5V
3V
C213
C212
L36
C209
C208
C218
C207
C210
DG
C230
IC59
R134
R153
C197
C201
C198
C202
C199
C203
C200
C204
SPRING
R78
R43
R47
R74
C114
C116
C172
C176
3V
R111
C115
R170
C148
R114
L67
C178
L73
R16
C127
R183
R181
R185
R184
L8
R169
C69
C18
R71
C9
R116
C206
5V
R95
R100
C117
C111
C143
L52
C177
C180
R107
C126
R127
L55
C125
R126
R118
L54
L53
View from foil side

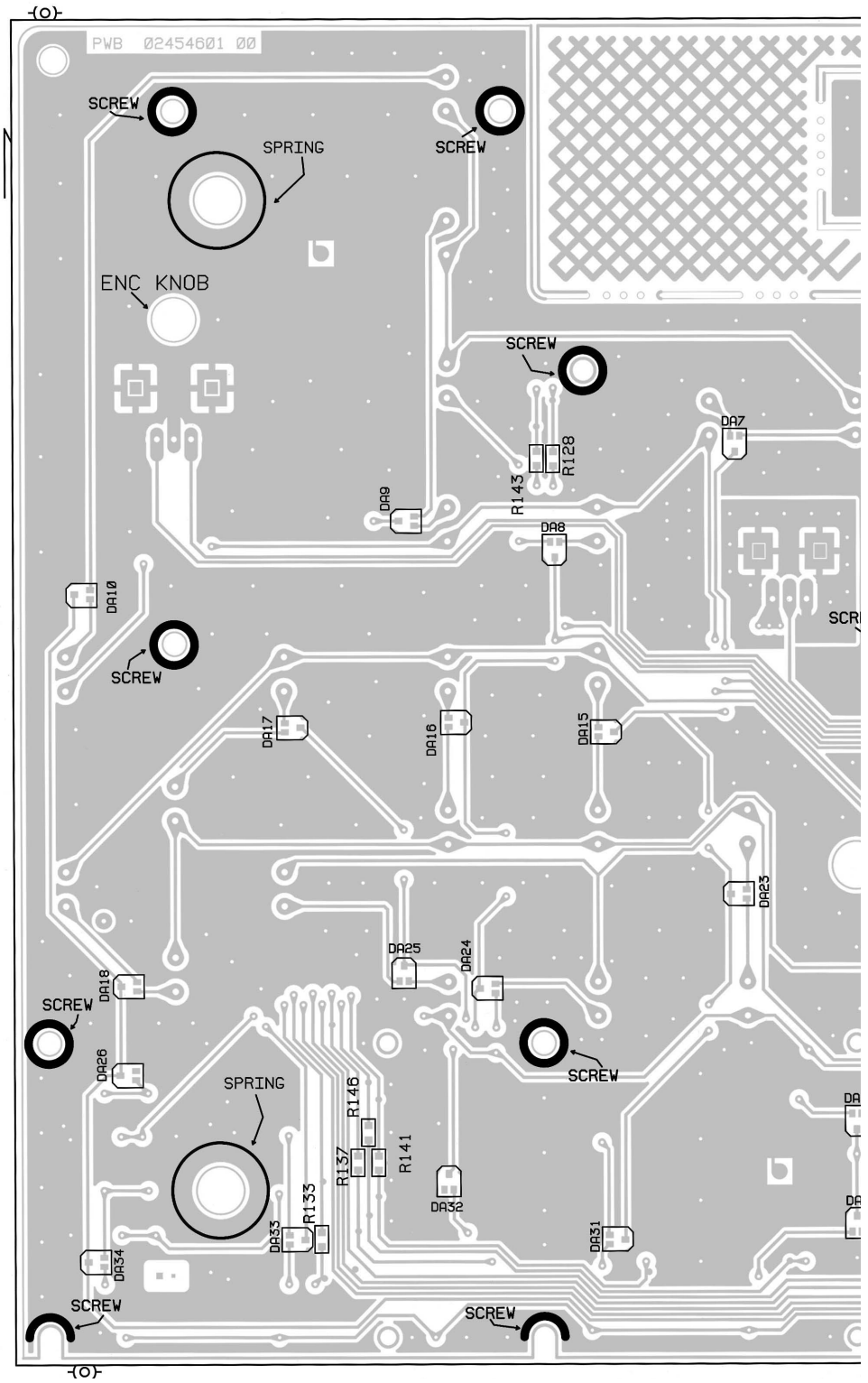
CIRCUIT BOARD (SW SHEET ASSY)

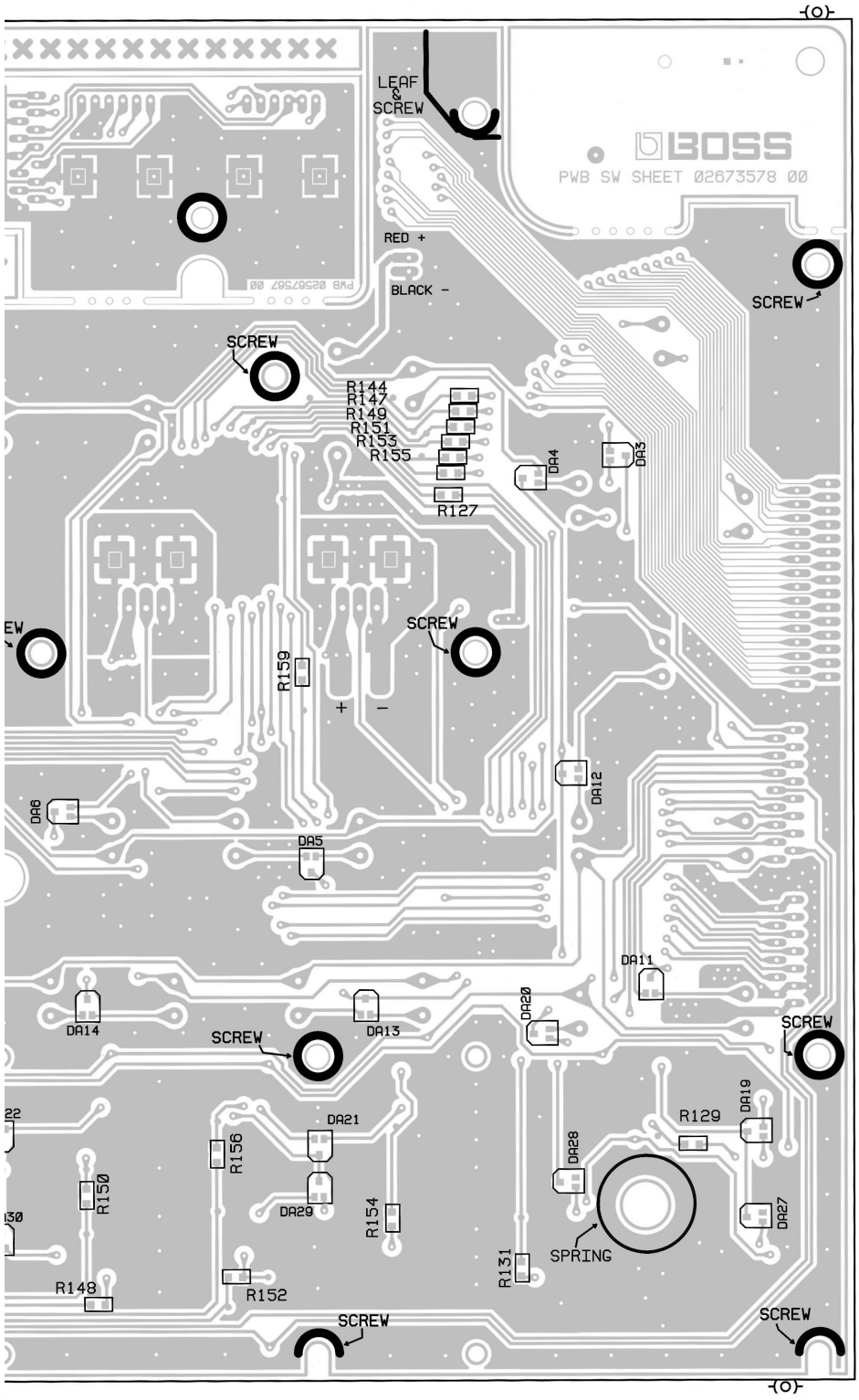




View from component side

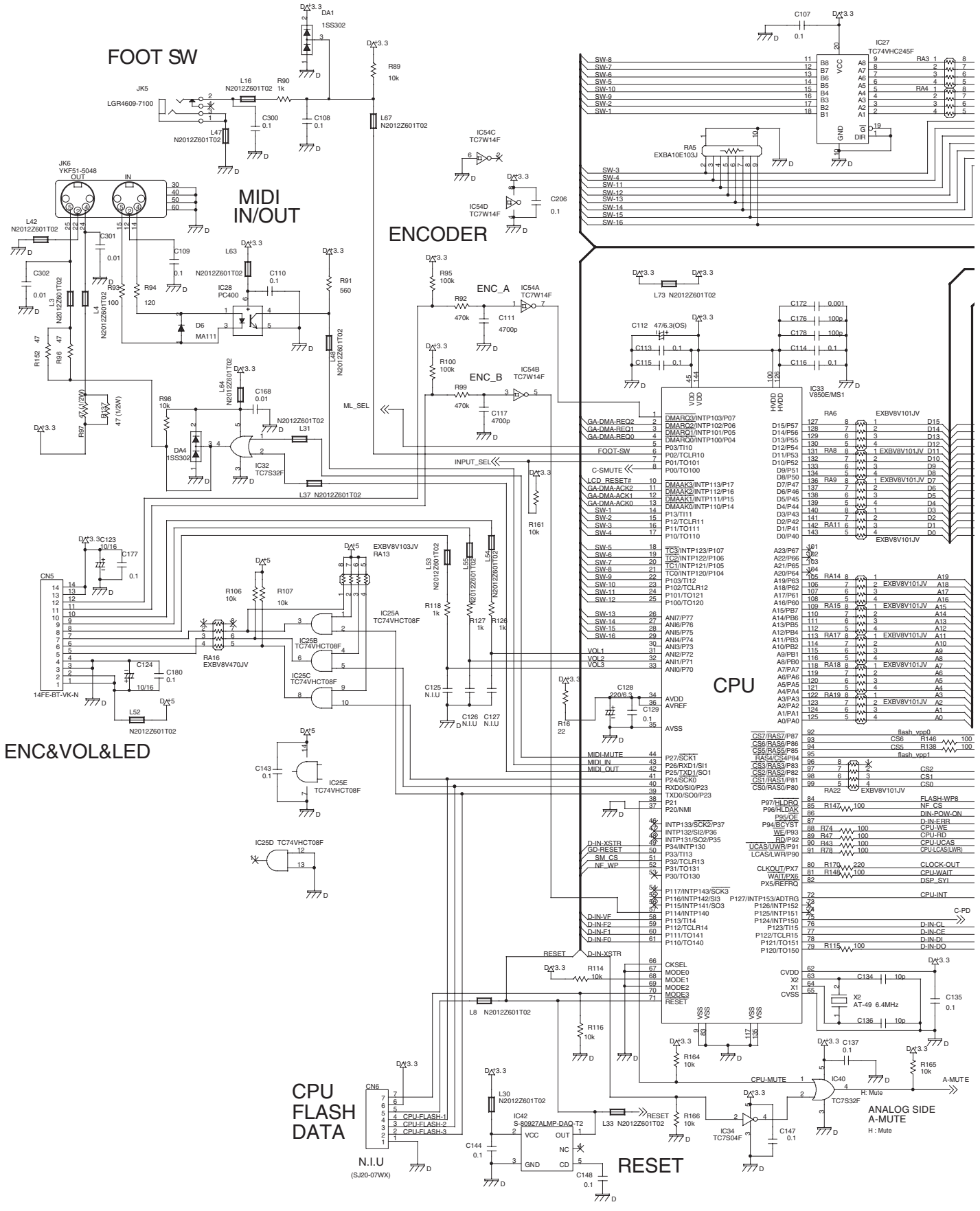
CIRCUIT BOARD (SW SHEET ASSY)

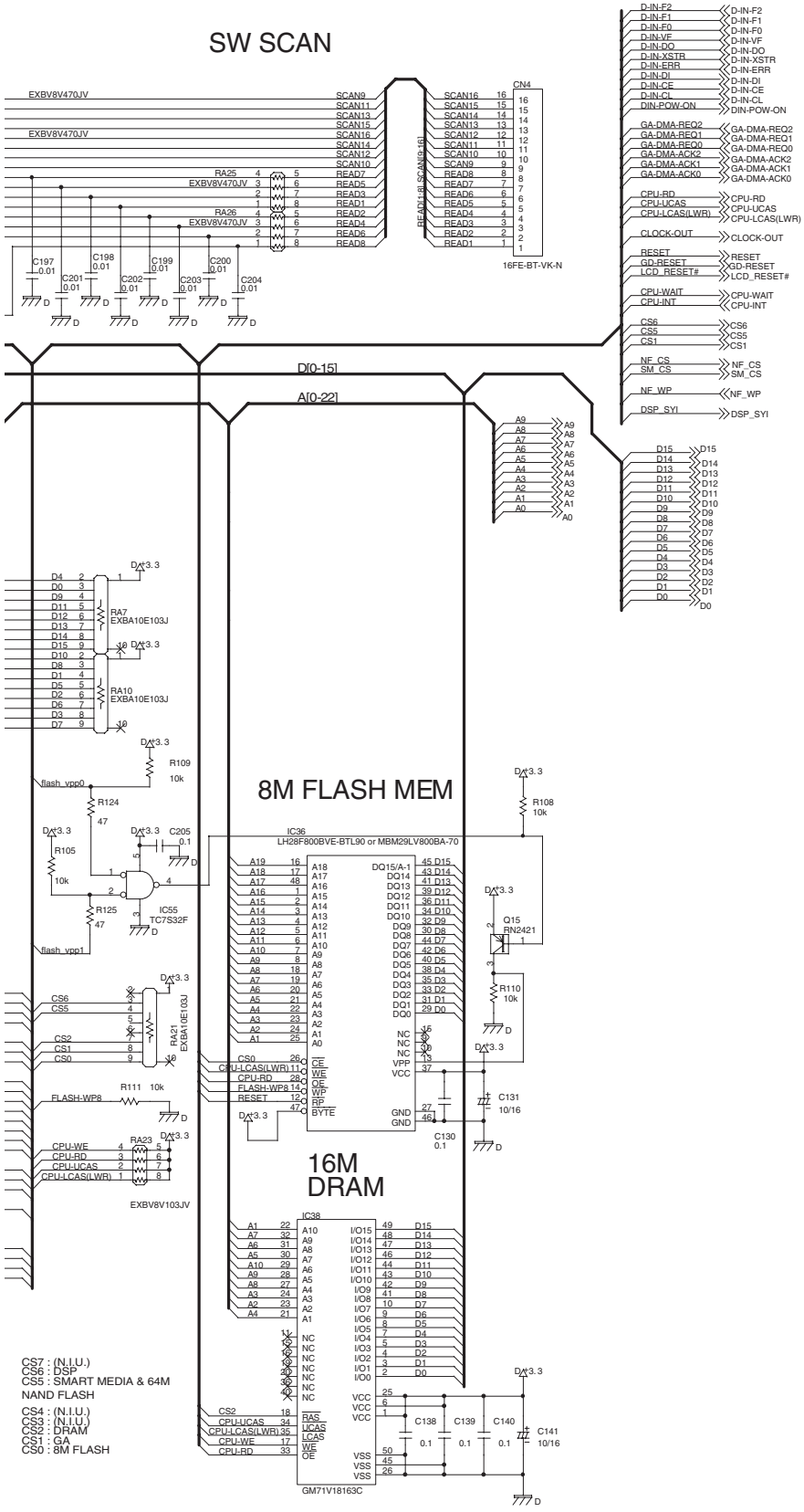




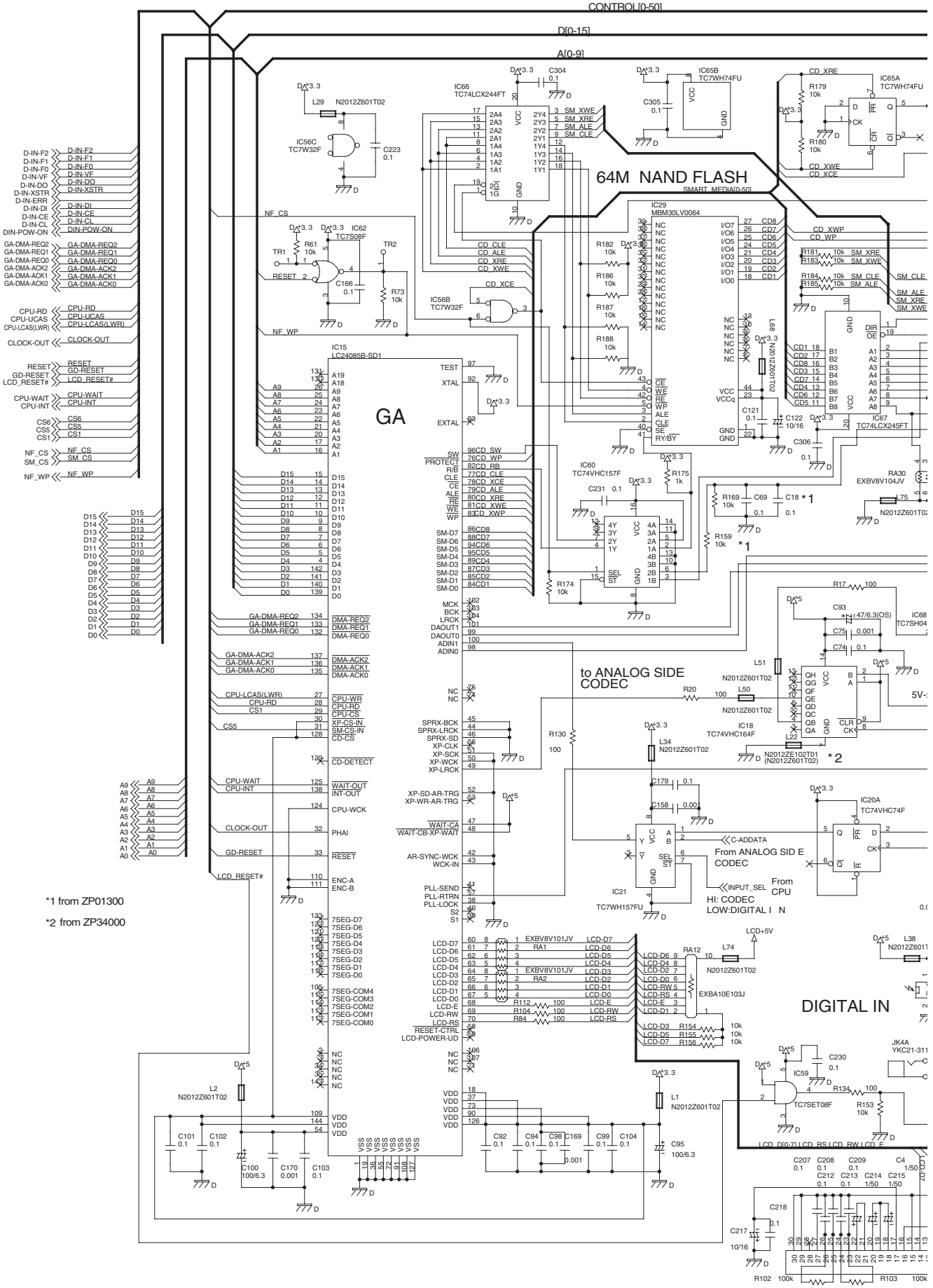
View from foil side

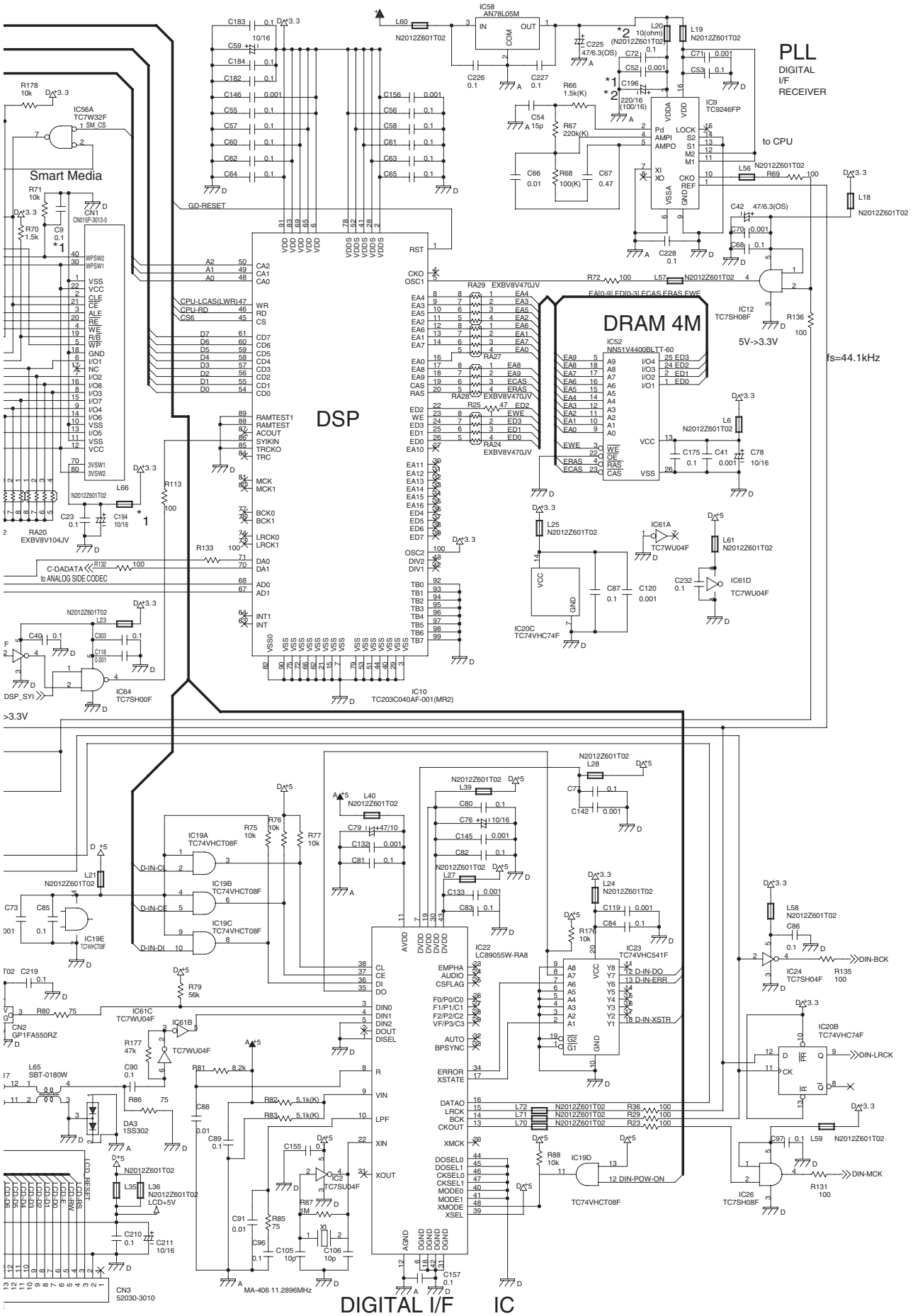
CIRCUIT DIAGRAM (MAIN BOARD ASSY/DIGITAL 1)



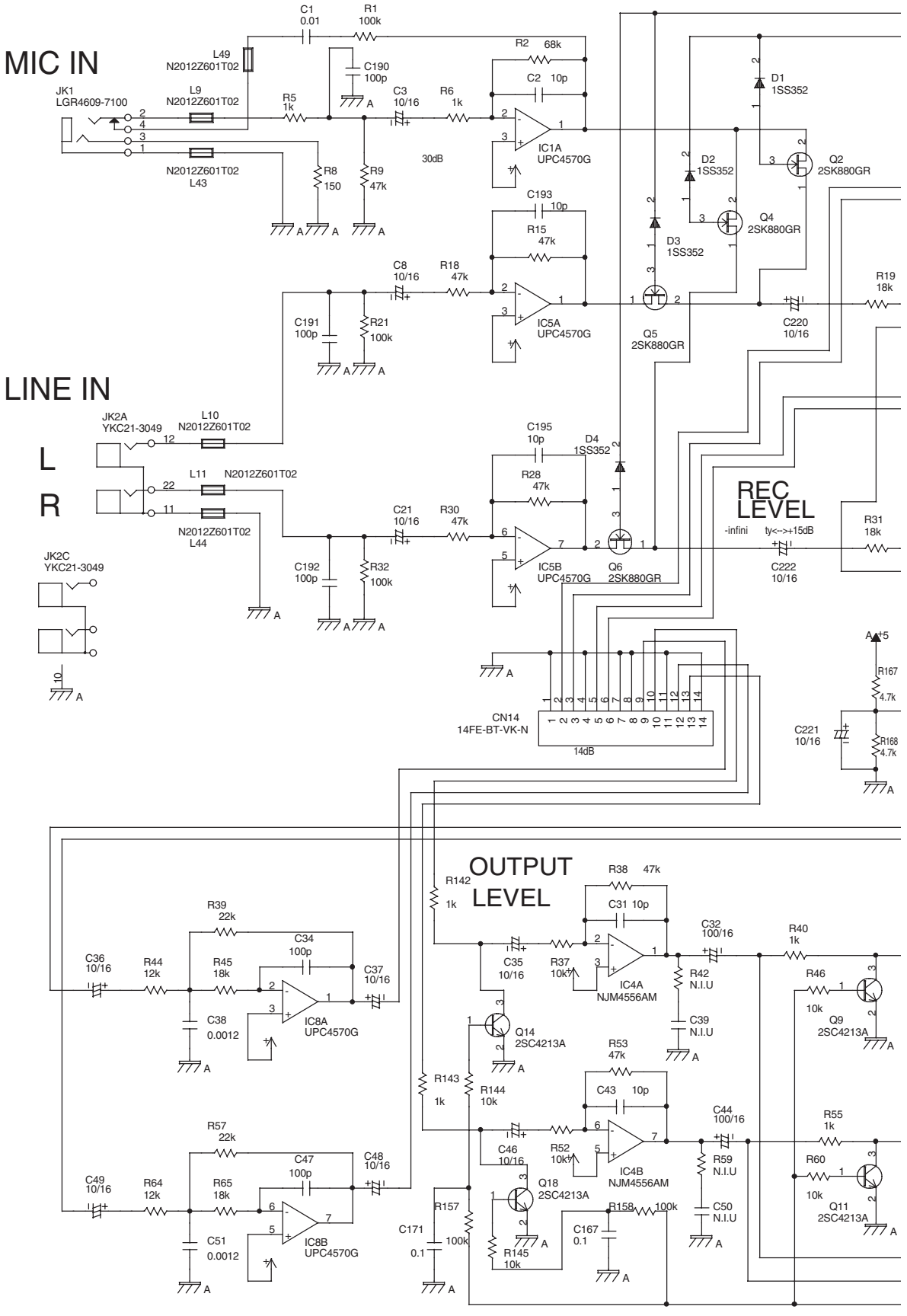

SW SCAN
8M FLASH MEM
16M DRAM
IC36
LH28F800BVE-BTL90 or MBM29LV800BA-70
IC38
GM71V18163C
IC55
TC7S32F
Q15
RN2421
CN4
16FE-BT-VK-N
D[0-15]
A[0-22]
CS7 : (N.I.U.)
CS6 : DSP
CS5 : SMART MEDIA & 64M NAND FLASH
CS4 : (N.I.U.)
CS3 : (N.I.U.)
CS2 : DRAM
CS1 : GA
CS0 : 8M FLASH

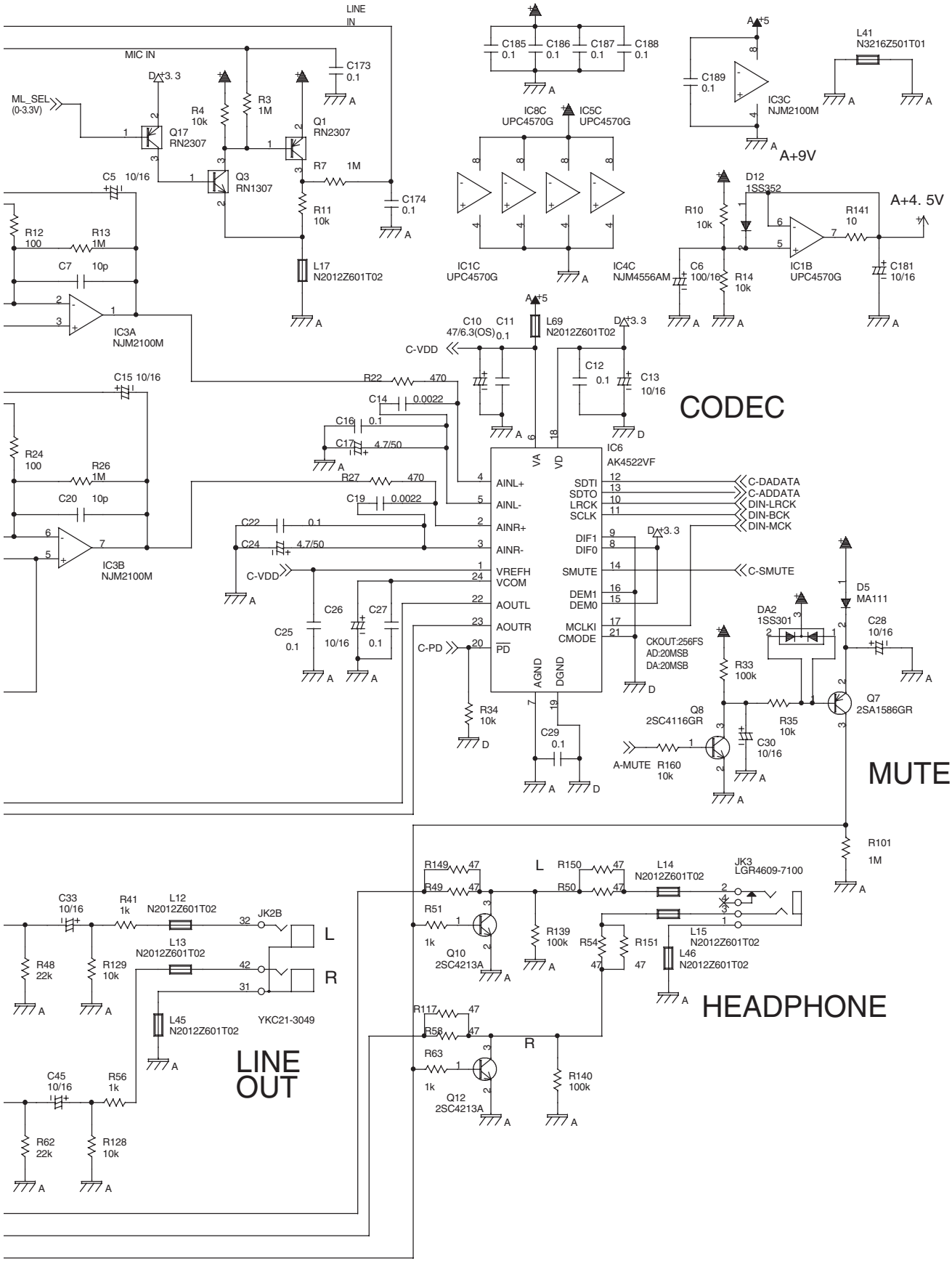
CIRCUIT DIAGRAM (MAIN BOARD ASSY/DIGITAL 2)



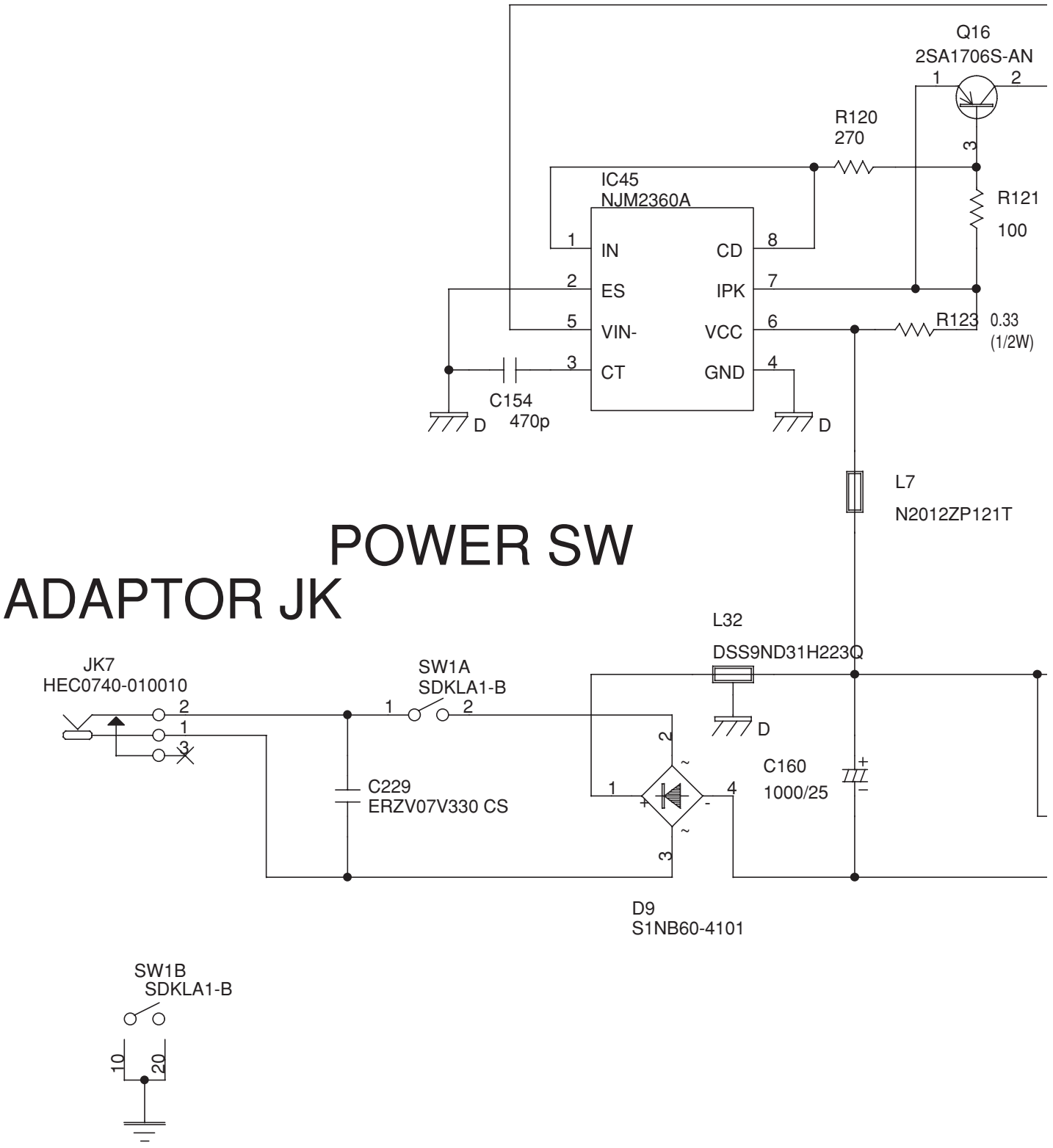

PLL
DIGITAL
I/F
RECEIVER
Smart Media
DSP
DRAM 4M
to CPU
5V->3.3V
fs=44.1kHz
DIGITAL I/F IC

CIRCUIT DIAGRAM (MAIN BOARD ASSY/ANALOG)



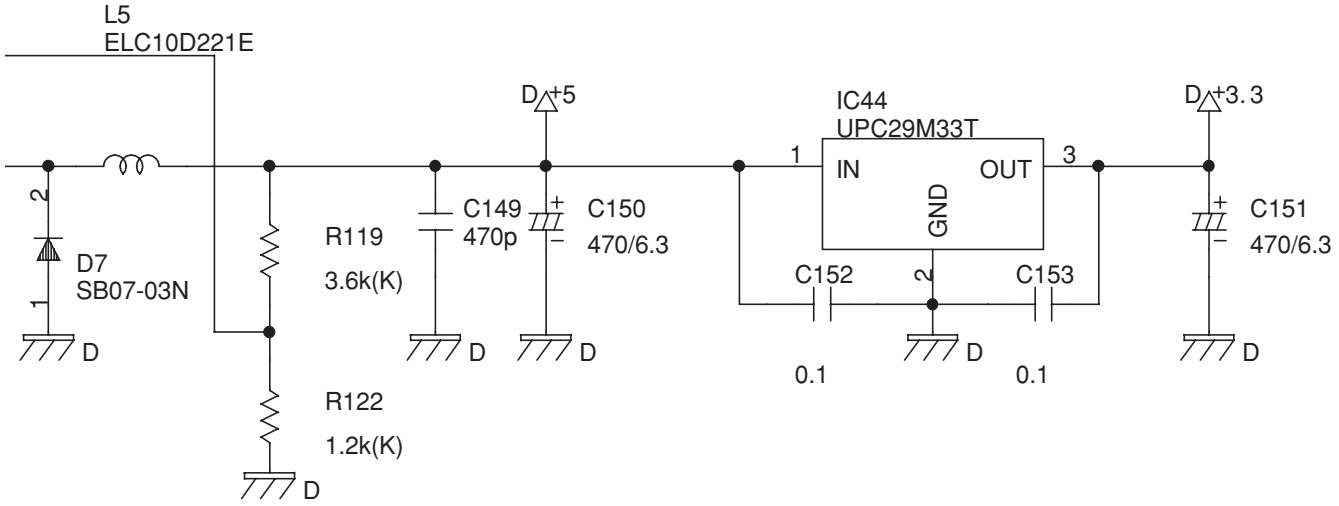

LINE IN
MIC IN
ML_SEL (0-3.3V)
Q17 RN2307
Q1 RN2307
Q3 RN1307
IC3A NJM2100M
IC3B NJM2100M
IC3C NJM2100M
IC8C UPC4570G
IC5C UPC4570G
IC1C UPC4570G
IC4C NJM4556AM
IC1B UPC4570G
A+9V
A+4. 5V
D12 1SS352
L41 N3216Z501T01
L17 N2012Z601T02
L69 N2012Z601T02
CODEC
IC6 AK4522VF
AINL+
AINL-
AINR+
AINR-
VREFH
VCOM
AOUTL
AOUTR
PD
SDTI
SDTO
LRCK
SCLK
DIF1
DIF0
SMUTE
DEM1
DEM0
MCLKI
CMODE
C-DADATA
C-ADDATA
DIN-LRCK
DIN-BCK
DIN-MCK
C-SMUTE
C-VDD
C-PD
CKOUT:256FS
AD:20MSB
DA:20MSB
MUTE
Q8 2SC4116GR
Q7 2SA1586GR
DA2 1SS301
D5 MA111
A-MUTE
HEADPHONE
Q10 2SC4213A
Q12 2SC4213A
JK3 LGR4609-7100
LINE OUT
JK2B
YKC21-3049

CIRCUIT DIAGRAM (MAIN BOARD ASSY/POWER)



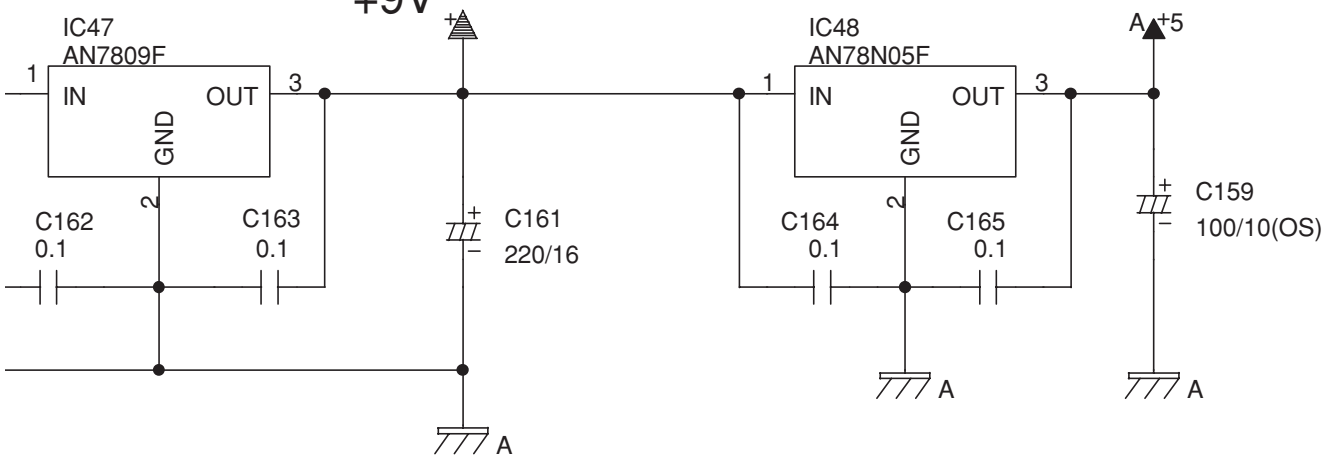
DIGITAL +5V
DIGITAL I/F,LED

DIGITAL +3.3V

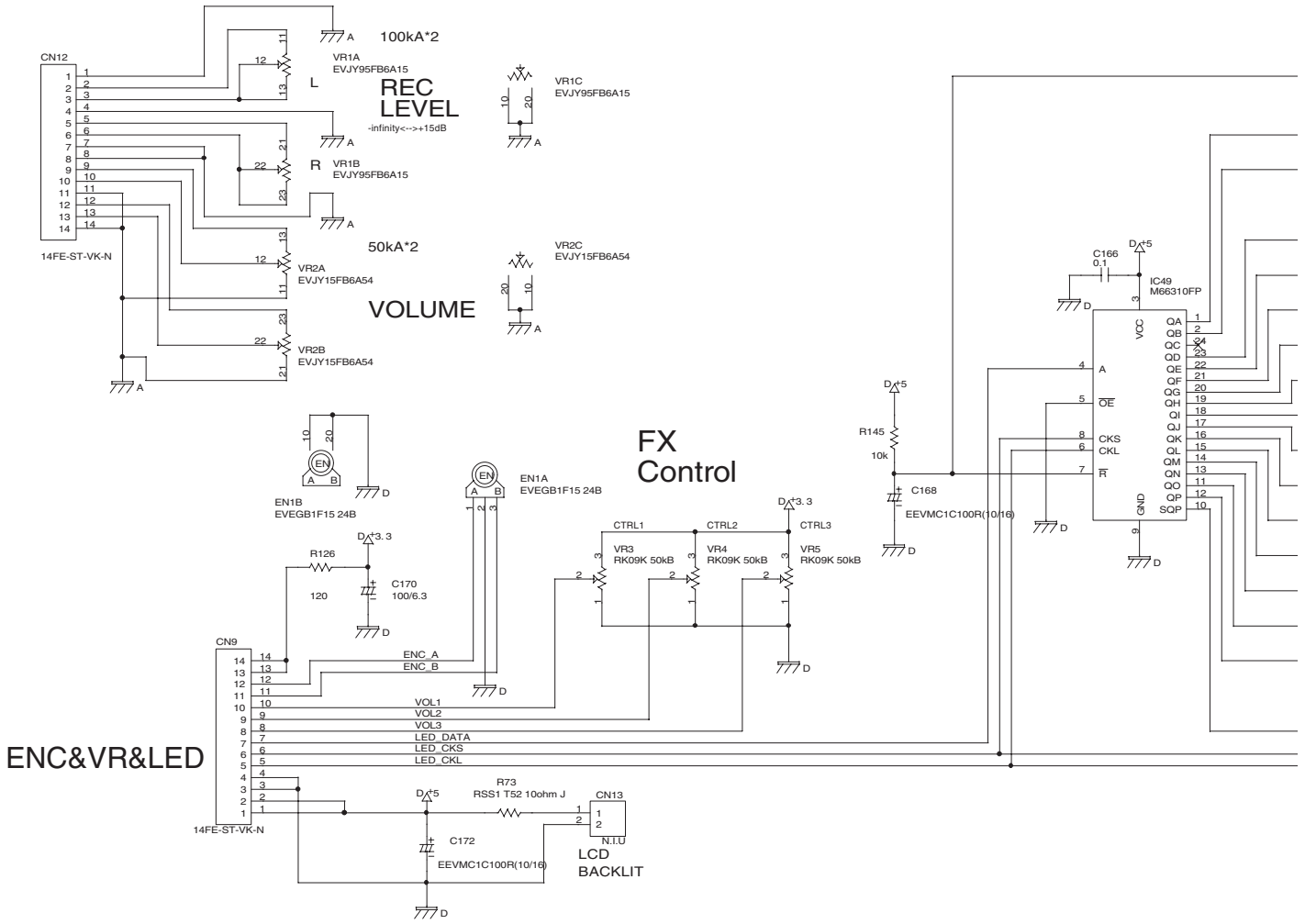


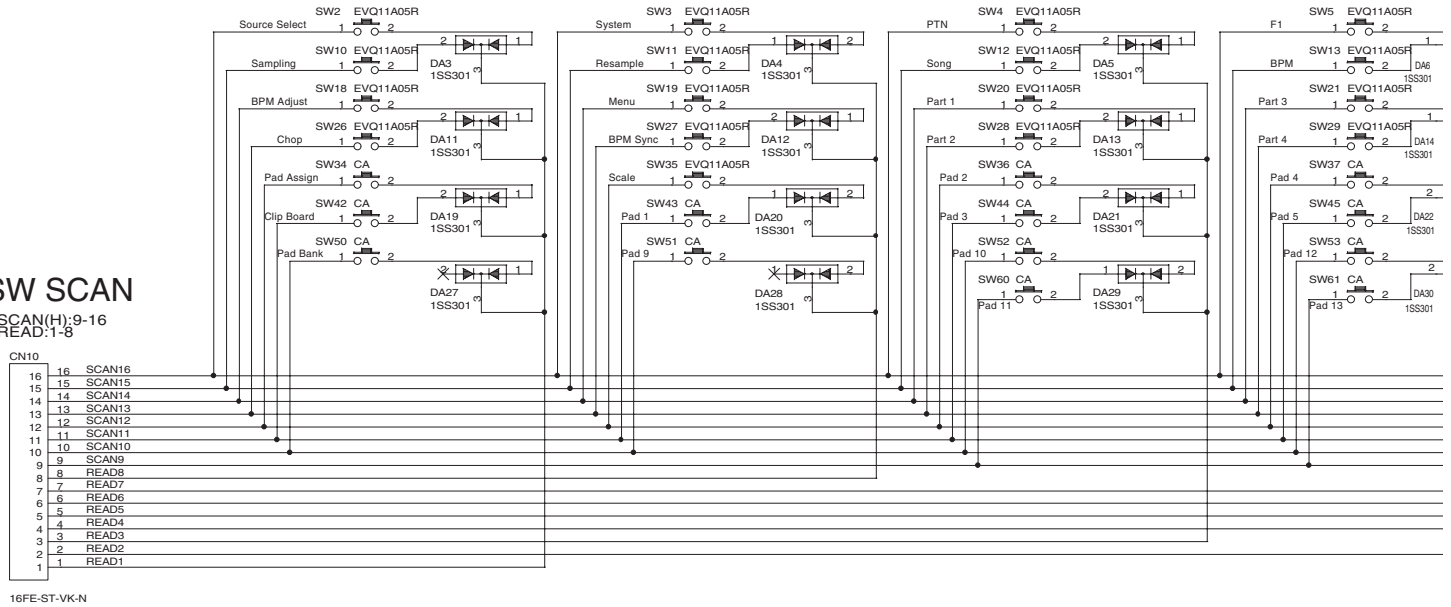
ANALOG
+9V

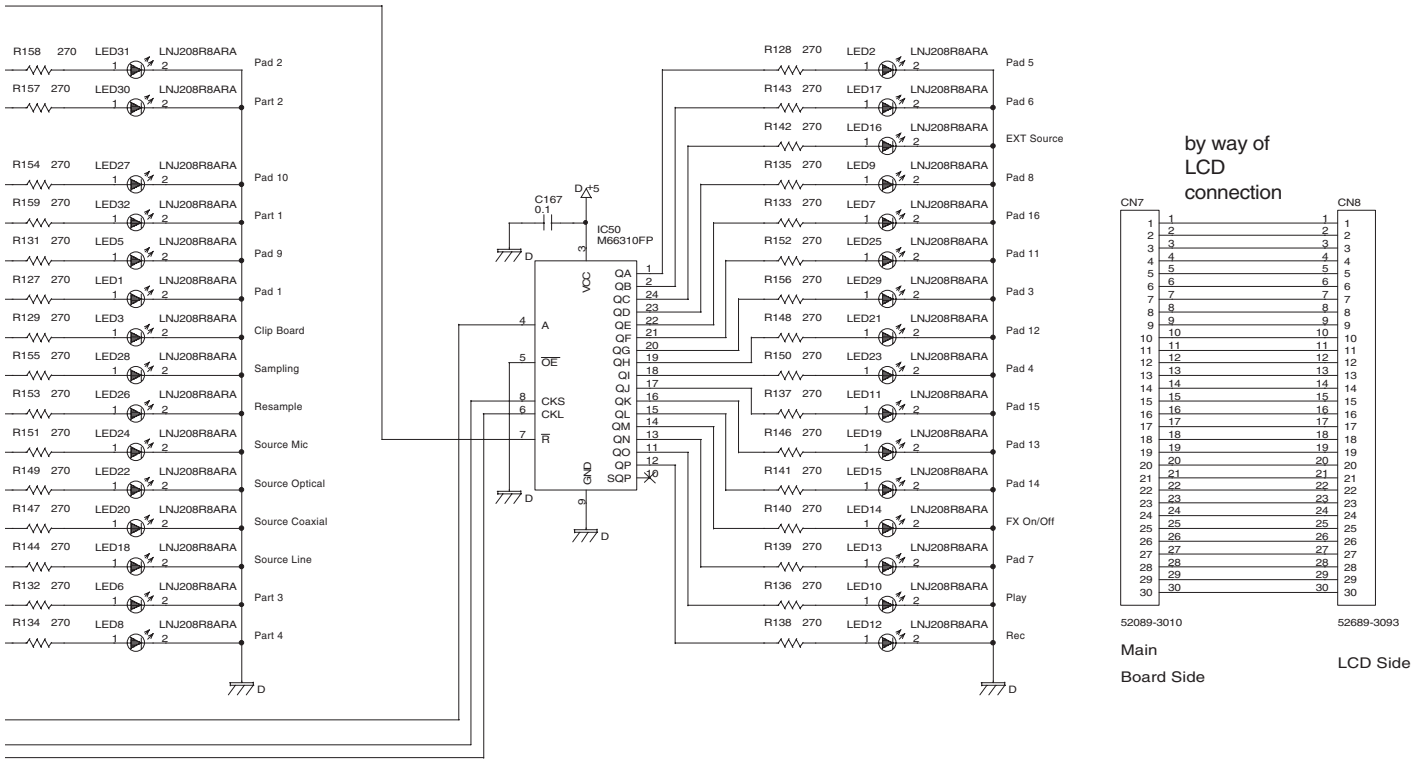
CODEC,DIGITAL I/F



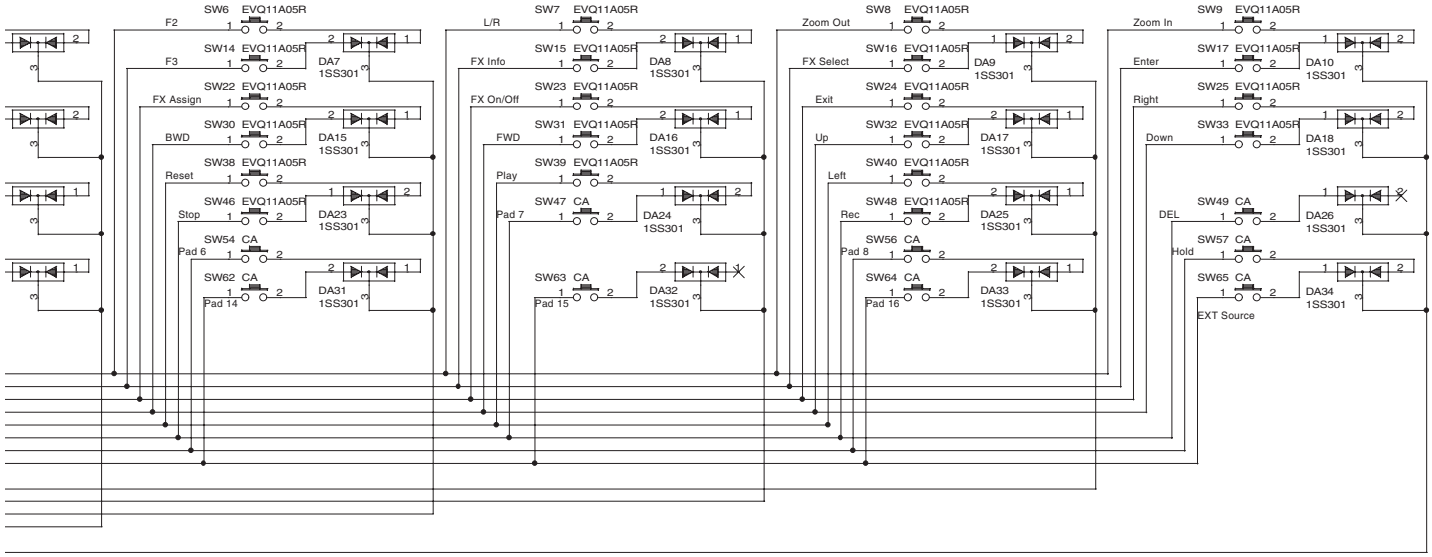
CIRCUIT DIAGRAM (SW SHEET ASSY)






R158 270 LED31 LNJ208R8ARA Pad 2
R157 270 LED30 LNJ208R8ARA Part 2
R154 270 LED27 LNJ208R8ARA Pad 10
R159 270 LED32 LNJ208R8ARA Part 1
R131 270 LED5 LNJ208R8ARA Pad 9
R127 270 LED1 LNJ208R8ARA Pad 1
R129 270 LED3 LNJ208R8ARA Clip Board
R155 270 LED28 LNJ208R8ARA Sampling
R153 270 LED26 LNJ208R8ARA Resample
R151 270 LED24 LNJ208R8ARA Source Mic
R149 270 LED22 LNJ208R8ARA Source Optical
R147 270 LED20 LNJ208R8ARA Source Coaxial
R144 270 LED18 LNJ208R8ARA Source Line
R132 270 LED6 LNJ208R8ARA Part 3
R134 270 LED8 LNJ208R8ARA Part 4
C167 0,1
IC50 M66310FP
VCC
GND
A
OE
CKS
CKL
R
QA QB QC QD QE QF QG QH QI QJ QK QL QM QN QO QP SQP
R128 270 LED2 LNJ208R8ARA Pad 5
R143 270 LED17 LNJ208R8ARA Pad 6
R142 270 LED16 LNJ208R8ARA EXT Source
R135 270 LED9 LNJ208R8ARA Pad 8
R133 270 LED7 LNJ208R8ARA Pad 16
R152 270 LED25 LNJ208R8ARA Pad 11
R156 270 LED29 LNJ208R8ARA Pad 3
R148 270 LED21 LNJ208R8ARA Pad 12
R150 270 LED23 LNJ208R8ARA Pad 4
R137 270 LED11 LNJ208R8ARA Pad 15
R146 270 LED19 LNJ208R8ARA Pad 13
R141 270 LED15 LNJ208R8ARA Pad 14
R140 270 LED14 LNJ208R8ARA FX On/Off
R139 270 LED13 LNJ208R8ARA Pad 7
R136 270 LED10 LNJ208R8ARA Play
R138 270 LED12 LNJ208R8ARA Rec
D +5
D

by way of
LCD
connection
CN7
CN8
52089-3010
52689-3093
Main
Board Side
LCD Side


SW6 EVQ11A05R F2
SW14 EVQ11A05R F3
SW22 EVQ11A05R FX Assign
SW30 EVQ11A05R BWD
SW38 EVQ11A05R Reset
SW46 EVQ11A05R Stop
SW54 CA Pad 6
SW62 CA Pad 14
DA7 1SS301
DA15 1SS301
DA23 1SS301
DA31 1SS301
SW7 EVQ11A05R L/R
SW15 EVQ11A05R FX Info
SW23 EVQ11A05R FX On/Off
SW31 EVQ11A05R FWD
SW39 EVQ11A05R Play
SW47 CA Pad 7
SW63 CA Pad 15
DA8 1SS301
DA16 1SS301
DA24 1SS301
DA32 1SS301
SW8 EVQ11A05R Zoom Out
SW16 EVQ11A05R FX Select
SW24 EVQ11A05R Exit
SW32 EVQ11A05R Up
SW40 EVQ11A05R Left
SW48 EVQ11A05R Rec
SW56 CA Pad 8
SW64 CA Pad 16
DA9 1SS301
DA17 1SS301
DA25 1SS301
DA33 1SS301
SW9 EVQ11A05R Zoom In
SW17 EVQ11A05R Enter
SW25 EVQ11A05R Right
SW33 EVQ11A05R Down
SW49 CA DEL
SW57 CA Hold
SW65 CA EXT Source
DA10 1SS301
DA18 1SS301
DA26 1SS301
DA34 1SS301

ERROR MESSAGES

Sampling related

Memory Full!

Sampling is not possible because there is no space in user memory.
>Delete unneeded sample data.
Ran out of user memory during sampling.
>Delete unneeded sample data.
Not enough memory to use the Chop function.
>Delete unneeded sample data.
Not enough memory to use the Pitch function.
>Delete unneeded sample data.

Awaiting Digital Signal

You are attempting to sample the signal from DIGITAL IN, no signal is detected.
>Check whether a digital signal is being output from the connected digital device. (For details, refer to the manual for the connected device.)
The sampling frequency of the signal from DIGITAL IN is not 44.1 kHz.
>Set the sampling frequency to 44.1 kHz. (For details refer to the manual of the connected device.)

Not Sampling Bank!

Sampling is not possible since the Chop bank or the Pitch bank is selected.
>Switch to another pad bank.

Protected!

Deletion is not possible because the sample is protected.
>Turn off the protect setting of the sample.
Overwriting is not possible because the sample is protected.
>Turn off the protect setting of the sample.

Protected! Sure?

Initialization is not possible because the sample is protected.
>To continue with initialization, press [F1] (YES).
To cancel, press [F2] (NO).

Too Busy

Notes are not sounded in time.
>Reduce the number of notes.

MIDI related

MIDI Off Line!

There is a problem with the MIDI cable connection.
>Check whether the MIDI cable has been disconnected or broken.

MIDI Buffer Full!

Too many MIDI messages were received all at once, and the SP-505 was unable to process all of them.
>Reduce the amount of MIDI messages being transmitted to the SP-505.

MIDI Error!

A MIDI message was not received correctly.
>Check whether the MIDI cable has been disconnected or broken.
>Check whether invalid MIDI messages are being transmitted.

Song/pattern recording related

Memory Full!

Song/pattern cannot be saved because there is insufficient space in user memory.
>Delete unneeded songs or patterns.

Too Much Data!

Recording/playback is not possible because there is too much performance data, or because the BPM is too fast.
>Lower the BPM. Delete unneeded performance data.

Pattern REC Full!

No more data can be recorded in the pattern, since the maximum number of notes that can be recorded has been exceeded.
>Delete unneeded data from the pattern being recorded.

Song REC Full!

No more can be recorded in this song, since the maximum number of patterns in one song has been exceeded.
>A maximum of 999 patterns can be registered as part of one song. No further patterns can be registered.

Card related

WARNING! Turn OFF Power Data Maybe Damaged!

A card was inserted or removed while the power was on, or the power was turned on when a card was inserted halfway.
>Turn off the power, remove the card or insert it correctly, and then turn the power on once again.

Memory Full!

Data cannot be saved, since there is insufficient space remaining on the memory card.
>Delete unneeded data.
There is not enough memory to load the WAV/AIFF file.
>Delete unneeded samples. (p. 49)
>Reduce the size of the WAV/AIFF file.

Protected!

Sampling to a memory card bank is not possible

because a write-protect sticker is affixed to the memory card.
>Remove the write-protect sticker from the memory card.
Data cannot be saved because a write-protect sticker is affixed to the memory card.
>Remove the write-protect sticker from the memory card.

Unsupported Format!

The format of the inserted memory card is a format that the SP-505 cannot use.
>The SP-505 is able to use only 8-128 MB Smart Media memory cards with a 3.3 V power supply. Please check the type of card you are using.
Loading/saving is not possible because the sample or sequencer data is corrupted.
>Either erase the offending data, or format the memory card.
You are attempting to load a WAV/AIFF file that cannot be loaded into the SP-505.
>Read the cautionary notes regarding the loading of WAV/AIFF files.

System related

Too Busy

The data could not be processed fast enough.
>Operate the buttons or VALUE dial more slowly.

Memory Damaged

The contents of internal memory have been destroyed.
>Perform the Initialize operation as directed by the display.

Others

Please Update Preset Files.

The preset data is not set. Load the preset data and enter the test mode.

Disk Full

The data form of WAV and AIFF is inaccurate. Please check the data form of WAV and AIFF.

Turn OFF Power Data Maybe Damaged

SmartMedia is not inserted correctly. Please insert SmartMedia correctly after shutting off a power supply.

* The following error is displayed and substrate repair is impossible for the case. Please exchange MAIN BOARD.

ERROR!!!

Fatal Error!!!

Seq System Error!

Sampling Failed!

Internal Memory is Unformatted...

Internal memory is not initialized.

Test mode related

NAND Flash

NAND memory (IC29) error

Bad Block

NAND memory (IC29) error

DRAM

DRAM(IC38) error

CPU RAM

CPU (IC33) internal RAM error

MR2 Busy

MR2(IC10) BUSY check error

MR2 IRAM

MR2 (IC10)internal RAM error

Effect RAM

MR2 External RAM(IC52) error

MR2 Read/Write

MR2 (IC10) RAM read and write error

Other SW Pressed

SW read error. Also displayed when two buttons are pressed at once.

Other Knob Moved

CTRL knob operation error

Reverse-Rotated

The encoder has been turned in the wrong direction.

Not Protected

The SmartMedia with preset data has no write-protect sticker.

No Card

The SmartMedia is not inserted.

Wrong Card

There are not necessary files on the SmartMedia.
It is not in SP505 format.
File read failed.

Protected

The SmartMedia is protected.

Update Failed

Loading of the preset data failed.

Delete File

The preset data deletion failed.

Write File

File write failed.

Read File

File read failed.

Verify File

File read and write check failed.

Not Exist Preset

Full/half-line test was executed before the preset data was loaded.